Clinical Demonstrations OF PHTHISIS.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton.

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LECTURE II.

GENTLEMEN,—When we last met we considered how far the modern pathology of tubercle and a clinical observation of phthisis can be made to agree. Theories change, and the fashion of the time, moulded, it may be, by the discoveries of the *jeunesse* of medicine, but the disease ever under your eyes has probably not altered from the days of Hippocrates till now. Its clinical varieties are well worthy your study, and, although you may not be able to tell at a glance the future of each, still there is a natural classification which will enable you to discriminate and assign fair reasons for your opinion. This knowledge is not to be found in a sorting of your cases into bundles, with a name attached to each, but rather to be sought in a careful clinical study. Thus you will find it abundantly demonstrable in these wards that there are many varieties of consumption, some of which become indefinitely prolonged, either from an inherent slowness to destructive change or because the local disease is limited, and the morbid action exhausted, as it were, in one circumscribed deposit, while others favour alterations in lung-tissue which convert its structure into an impervious mass, little influenced either by further inflammatory action or new deposits of morbid matters. Thus the *nature of the morbid products* in the lung is of primary importance in your prognosis, and the fact of the origin of the attack in acute inflammatory or in slower insidious forms of disease. Again, there are modifying agents which shape, as it were, the progress of the affection; and these are found in the age and constitution of the patient, in the build and shape of his chest, in the diffusion or massing of the deposit in the lung, and in certain of the occasional events of phthisis, such as profuse hæmoptysis. I shall dwell on all of these, and show you specimens of each variety, and shall ask you to take good notice of the fact that some individuals evidence, by their plump, well-nourished condition, how tolerant the system may become of a very considerable amount of local disease, while others nearly perish from the constitutional irritative fever due to an affection, it may be, of one lung, limited in extent, but undergoing rapid softening.

The natural divisions of phthisis are, therefore, more numerous than the old three stages into which it was formerly divided; yet it is necessary to consider these, although they are erroneous guides to prognosis, inasmuch as they do not mean all that they appear to do. Many patients have strayed out of the condemned divisions, and in the third (and "last") stage have laughed at their doctors and proclaimed the fallacies of the "faculty." Patients will live with cavity in the lung for an indefinite number of years, or such an arrest of symptoms may occur in any stage as shall give time for a recovery of the nutritive processes. Only keep off the inflammatory attacks (for inflammation plays the most important part in the whole history of consumption), and if your patient preserve a healthy digestive system the stage of the disease is unimportant. Yet let us briefly examine these stages, which have their use and must be retained for purposes of study and accurate description, but do not mistake their meaning. They refer only to a state of lung, and not to a state of health. The *first* is the period of deposit or thickening of the lung, the *second* that of softening or disintegration, and the third that of *cavity*. The *first stage* of established disease of the lung—recognisable, that is, by physical signs denoting alterations in its structure—means such a block of a portion of the organ as shall render it less pervious to air. Hence the natural resonance which it gives on percussion is lost, the *intensity* of the air-sound as it enters is diminished, the *character* of the breath-sound is altered by the changed elasticity of the alveoli and minute tubes, and the air leaving the lung on *expiration* gives a more prolonged tone. The natural resonance of the voice and cough in the bronchial tubes is intensified and more directly conveyed to the ear, because the elastic and air-containing tissue of the lung is replaced by a solid medium which is a better conductor. It is obvious that this condition may be due to several causes either within or without the alveoli which have become closed up and impervious to air. An ordinary catarrhal pneumonia, resulting in proliferation of epithelial growth, will produce such an *intra-alveolar* block. The ultimate vesicles of the lung are filled up, the elasticity of their containing walls is destroyed, and what is called vesicular breathing is at an end, the entering air, when it reaches the ultimate bronchioles, being unable to penetrate further. Thus it is that the soft, gentle sound of pure respiration, which we hear in a healthy lung, is lost, and if the lung-block be considerable the breath-sounds are of necessity bronchial, being, in truth, only formed in the tubes, and not in the ultimate vesicles. It is safe to say that a large proportion of the cases which end in phthisis, or ulcerated lungs, begin in this way, by catarrhal products blocking the alveoli of a portion of the lung; and if you were to cut down on this diseased spot, you would not find the grey, semi-transparent granules of Bayle, but the products of an inflammation. They have the same clinical history, but such alterations in the lung are not tuberculous, although you will find in practice that if not speedily liquefied and expectorated they either become caseous, and soften, breaking down the alveolar walls and ulcerating the lung-tissues, or, in certain cases, undergo the cretaceous transformation and become obsolescent. But, again, this pulmonary block may be *outside* the alveoli, and in that interstitial tissue which is spread through the lung—peribronchial and perivascular—that is, surrounding the vessels and bronchi, the *adenoid* or lymphatic tissue described by Dr. Burdon-Sanderson. It has been well demonstrated that it is capable of overgrowth from irritation, and in such circumstances it ceases to be the fine soft bed in which vessels are contained, and hardens, thickens, and compresses both the bronchi and alveoli, causing the collapse of the latter. The vessels are also enwrapped, as it were, lessened in calibre, and the circulation, both of air and blood, interrupted. In a later stage, as I shall show you, this process ends in producing what is called fibroid alterations, which both harden and contract the lung. This first stage of phthisis, then, consists in a block of the lung; and two causes can produce it—the intra-alveolar plugging by the products of inflammation, and the extra-alveolar pressure by the natural interlobular tissue becoming thickened. A third cause is more rarely found in what are called "dust" cases—the dust of coal-mines, factories, and potteries becoming impacted in the alveoli, and mechanically blocking the lung; and this is invariably accompanied by an overgrowth of the adenoid and fibrous tissues, and all such cases, when chronic, belong to the class of fibroid phthisis. Let us consider these causes of lung-block clinically. You may not be called to see the first approaches of such a case, but very often indeed you will find a patient with this history and physical condition of a part of one lung, generally the apex. He will tell you that he has had cough after taking cold some weeks or months previously. A feverish cold, with pain in one subclavicular region; cough, slight greyish starchy expectoration, some emaciation, and generally depressed health. On examination you find the chest-walls slightly flattened to the second or third rib, lessened expansion, slight dulness, and deficient breath-sounds. There may be a whiffy character of respiration, and slightly increased vocal resonance. What is this case? I believe it to be one of *severe alveolar catarrh*: the vessels have been blocked by large granular cells which have undergone fatty degeneration and been expectorated. But the walls of the alveoli have been damaged and collapsed, and a portion of lung is permanently blocked. This is not a tubercular case, and your patient

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may remain for years with the same physical signs, and without extension or even renewal of disease. We meet with them every day in practice. They are delicate, but perhaps have no cough. Yet they should live with care, for they carry with them a liability. Either a second attack may occur in a different part of the lung, or the old nidus of disease in the apex may break up, and the degenerated product be carried into the circulation, and the patient be inoculated with morbid matter, resulting in a second deposit, with accompanying hectic and all the history of phthisis. The above symptoms may also, no doubt, approach insidiously, and with premonitory conditions obscure but intelligible to the observant; and this early stage has been much dwelt on. I have long believed that there are symptoms before there are physical signs, a systemic or constitutional condition before any local disease exists; and a very serious question arises here. Do the whole train of symptoms in phthisis, the hectic irritative fever, sweating, waste, and exhaustion, only depend on a localised lung disease, of which they are the reflection, and which stands to them in the relation of cause to effect, just as the diseased joint gives rise to suppurative hectic? or is there a primary constitutional disorder, of which the local disease is only a sequence, expression, and result? Would a healthy person ever have such an alveolar catarrh as I have described, resulting simply from a neglected cold, and without any previous disorder of health? It is true that by far the most important agent in precipitating lung disease is inflammation; but is the inflammation itself idiopathic, or has it arisen out of a previous condition of blood or tissues which have impressed on it a stamp and form, and made it not quite what we call a healthy inflammation? For there is a healthy inflammation, as you know, and is this it? "Certainly not," you reply, "the products of healthy inflammation are temporary, plastic, removable, not permanent, ill-vitalised, degenerative, like these blocked alveoli." Then why is it so? We all go through our severe colds and outlive them. Whence this insidious filling of the lung with epithelium granules, tubercle—what you will? or this acute localised patch of deposit after a few weeks' fever, which will not organise, nor resolve, but remains to degenerate, ulcerate, waste? It is true that the fever in phthisis is generally a measure of the irritation of the lung, but is there no fever premonitory and leading the way to these lung alterations? I must answer in the words of Latham: "Pulmonary consumption is only a fragment of a great constitutional malady, which it belongs to a higher discipline than any mere skill in auscultation rightly to comprehend." And as regards premonitory symptoms, I ask you to regard with much anxiety and grave care *the union of subfebrile symptoms with progressive waste of the body*. Here is danger without any physical signs, but if the latter be superadded you have lung disease, and localised lung disease with fever is catarrhal pneumonia, tubercle, hyperplasia of adenoid—what you will, but, above all, it is phthisis.

In studying such a case you must exclude several causes which might mislead you. Emaciation may be due to dyspepsia, and cachexia from syphilis, diabetes, chronic abscess, joint affections, and fever, as well as other alterations of health. In all cases the rule should be to regard moderate fever of the remittent kind and wasting of the body with great suspicion.

Let us just consider the progress of a healthy sthenic pneumonia in contrast. Your patient, hitherto healthy, has been exposed to cold, generally rather severely, and after sweating. He shivers, and has an immediate rise of temperature to 103° or 104°. This is followed by moderate but rapidly-increasing dulness over one lung from the base upwards even to the apex. A fine crepitus succeeds, and the breath- and voice-sounds become tubular. Dyspnœa marks the lessened space for breath, and rusty sputa the extreme congestion in the lung. There is little pain, but there is much fever and distress, and the patient has a burning skin and patches of redness on the malæ. On the seventeenth day, or later, a crisis occurs; the temperature drops suddenly, the physical signs alter, the dulness lessens, and a coarse crepitation replaces the fine. In an incredibly short time there is convalescence, and the lung-signs are normal. In this case no one can doubt that the lung-alveoli are blocked by exudation so thoroughly that, in fact, no tissue in the lung is pervious to air except the larger bronchi. But there is speedy resolution; the plastic exudation readily liquefies, resolves, and is absorbed and expectorated. It is plainly not the *extent*, but the *nature* of the lung deposit which is dangerous, and it is equally plain that the alveoli, although blocked and filled up, have not been injured, for we find that the recovery after such an attack is perfect, and the integrity and elasticity of their walls is complete. There is no ulceration of lung at all in the case, and the organ returns to a condition sound and pervious, with free elasticity, a perfect double circulation, and all functions unimpaired. Where, then, is the difference between this sthenic pneumonia and the alveolar disease which I have described as leading to phthisis, nay, as so often destructive of the lung and of the patient? Doubtless it is found in the nature of that diseased product which will not liquefy nor resolve, but precipitates destructive ulcerations of the surrounding tissues. And let us go a step further back, and ask why is not the product of disease a healthy, removable product? why is it low in organisation, liable to degenerative change, but not liable to such a complete and rapid form of degeneration as would remove it from its dangerous impaction in the lung? We are compelled here to seek an antecedent cause, which is higher up in the chain of morbid events, and we say, here was a "constitution," or an hereditary predisposition, which caused this inflammatory block in a portion of one lung to be of infinitely greater danger than the inflammatory block of a whole lung in another individual. I wish I could explain this to you; but here are the facts, and they are hard of interpretation, and we are driven to obscure terms like "diathesis" to cover our ignorance. But do not mistake me; up to this point all is clear, but behind it lies the field for future advances, and perhaps a lessened mortality.

Look at a case of unresolved pneumonia, and you see "phthisis." Such a case has generally not been sthenic, the temperature has not been excessive, and there have been variations looking like recovery. The dulness has not been complete, but in patches, and the locality of these patches has changed; one has partially cleared up, only to be replaced by another. The rusty sputa are rarely seen. I have said the pyrexia was less marked, but the fever changes its character into a slow remittent with the diurnal variation of phthisis; low temperature in the morning, and 103° in the evening. At the end of two or three months the case has not cleared up, and your patient is weak, emaciated, and has night-sweats. His lung (one lung) may be dull in parts at the base, much more rarely at the apex or in the middle near the root of the lung, and not only is the breath-sound tubular, but there is crepitus here and there. The medical attendant is alarmed, and with reason, and says he would gladly have exchanged such a case for a true active pneumonia with much fever and high temperature, and complete block of a whole lung. In this opinion he is right. He will ask you anxiously in consultation if this be tubercle. I care not for names. It is a deposit in the lung which will not resolve, and which threatens to destroy the alveolar walls and to give rise to the train of symptoms which indicate ulcerated lung-tissue. I would have you carefully note the small portion of lung engaged as compared with a sthenic pneumonia, the deficiency in the resolution of the local disease, and the passage of pyrexial fever into hectic. Now we have brought our comparison of cases and our reasoning on them to this point, that the difference between the unresolved pneumonia and the catarrhal block of the alveoli or the old localised deposit of tubercle—call it which you will—is in the nature of the product extended into and around the alveoli, and not in the extent of lung engaged. For in the first case you have a commencing phthisis, and in the latter you have a very acute disorder, with ten times the amount of local mischief, and yet complete recovery is almost sure to follow. Histology will not unravel the difference between the two cases, and it will not do to look through a microscope or listen through a stethoscope for the cause. The histological appearances and the physical signs are nearly identical in the two cases, and hence I ask you to examine deeply and carefully into the vital phenomena and the antecedent history of the two cases, and trace how the feeble constitution with inherited tendencies produces a distinctive product in the lung, and how the healthy is enabled to battle against an infiltration of a whole lung successfully.

It was perhaps best to consider these questions while ex-

amining what has been called the first stage of phthisis, or that which is characterised by a morbid product in a portion of the lung. If we could define the pathology of this stage, we should have accomplished the most difficult part of our task.

One symptom to note in phthisis is, that not unfrequently an hæmoptysis ushers it in; and it is true that some of the more rapid forms of phthisis are so commenced. A patient, overworked, it may be, or enfeebled by anxiety or other depressing agents, will bring up a mouthful of blood, and soon present all the physical signs and the fever and waste of phthisis. In such an event you must watch the temperature and pulse quite as much as the physical signs, and if much fever, with an evening temperature of 102° or 103° prevail, and morning sweats, the case is likely to be rapid in its changes for the worse, even without pause, till a cavity is formed; or progressive softening of the lung may occur, and the case become one of galloping consumption. This event is to be looked for, but is not an invariable sequence of a rather profuse hæmoptysis occurring as an early symptom. Its meaning is undoubtedly great congestion of the lung, and we must remember that rapid softening occurs often. Either inflammatory products block the alveoli, or, as has been said, retained clots of blood form the nuclei of degeneration, and in their changes involve the lung-tissue itself.

Not all these cases so initiated do badly, but many pass into the chronic stage, exhibiting little tendency to degenerate or ulcerate the lung, and the symptoms, although primarily severe, may subside, and leave only the signs of a quiescent block of a portion of lung, while the patient recovers a fair condition of health. An hæmoptysis depletes the lung and relieves the congestion, as I shall have occasion to point out to you again, and its occurrence is often followed by a long period of quiescence or latency of disease.

ON GELSEMINUM SEMPERVIRENS.

(*Continued from p. 417.*)

PRELIMINARY ACCOUNT OF EXPERIMENTS RELATING TO THE ACTION OF EXTRACT OF GELSEMINUM ON THE RESPIRATORY MOVEMENTS.

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IN previous papers it has been shown that gelseminum exercises a very remarkable influence on the function of respiration, and that when the drug is given in fatal doses death takes place, as in poisoning by curare, by gradual arrest of the respiratory movements. Facts have also been referred to which plainly indicate that this result is not, as in the case of curare, to be attributed to suspension of the functions either of the motor nerves or of the muscles to which they are distributed, so that the conclusion can hardly be avoided that this agent exercises its influence directly on the cerebro-spinal centres, and particularly on those parts which preside over the rhythmical respiratory movements.

Before proceeding to relate the results of experiments made for the purpose of investigating the nature of this influence, it may be useful to place before the reader some statements as to the mechanism of what may be called the respiratory nervous system.

It is one of the most important results of the investigations of the past thirty years in relation to the physiology of the nervous system, that each of the combinations of muscular movements by which the great mechanical functions—viz., respiration, circulation, &c.—of the organism are kept going independently of the will or contrivance of the individual, is under the control or direction of a so-called "motor centre," *from* which emanate those outgoing channels of influence by which the muscles concerned are brought into harmonious action for the effectual carrying out of the function, and *towards* which those afferent channels converge, by which the centre is itself brought into relation either with the outside world or with other parts of the nervous system.

Of these centres some act automatically, others excito-motorially: by these expressions it is meant that in some instances the centre issues its commands from time to time to the muscles over which it presides, independently of any impression or influence received from outside through afferent nerves; whereas in others, although the centre acts independently of the mandates of the will, it exerts itself only when it is awakened to action by some stimulus of external origin.

Of the automatic centres, that which presides over respiration is one of the best examples, not only because we have very precise knowledge as to its anatomical situation in the floor of the fourth ventricle, but because the experimental evidence that its action is purely automatic, and not reflex, is clearer and more conclusive than that which can be given in respect of any other similar structure. For it has been shown by the most conclusive experiments that so long as the respiratory centre is supplied with blood which is sufficiently arterialised, and is in communication by motor nerves with the muscles over which it presides, it continues to discharge itself rhythmically towards these muscles, so as to determine that orderly combination of movements of which respiration consists, notwithstanding that all possible channels of extrinsic influence have been cut off.

In addition to this fundamental fact of the pure automatism of the respiratory centre, there are others which must be borne in mind in order to a proper understanding of its function. The first of these is the remarkable relation between its functional activity and the quantity of oxygen (in the form of oxyhæmoglobin—i.e., in combination with the crystalline colouring matter of the blood) which is supplied to it, which is of such a nature that respiration diminishes or (as is the case in most animals) ceases as the blood approaches the condition of complete saturation with oxygen; while, on the other hand, when the quantity of this gas held in combination by the blood-corpuscles becomes defective, the activity of the respiratory movements increases more and more until, as in asphyxia, the functions, not only of the respiratory centre, but of other essential parts of the nervous system, become so disordered and impaired that the continuance of systemic life is no longer possible.

A second fact relates to the channels by which the centre acts on the individual muscles which take part in the respiratory process. In man and many other animals, the only muscle concerned in ordinary tranquil breathing is the diaphragm. As respiration becomes more active other muscles—e.g., the intercostals, the scaleni, the external laryngeal muscles, &c.—come successively into auxiliary action. All of these act in respiration under the direct control of the centre, with which all must therefore be in direct communication by motor nerves; but the *facility* with which the centre discharges its influence towards these several muscles is evidently very different. Under normal conditions its area of influence is limited to the diaphragm, or at most to that muscle and to the intercostals; but as its supply of oxygen diminishes, this area, step by step, extends to an increasing number of muscles, as is familiar to everyone who has had the opportunity of watching a human being or an animal in the successive stages of dyspnœa. We can explain this in one way only—namely, by supposing that the channels of discharge leading to different muscles offer very different degrees of resistance to its passage.

There is, however, another fact which must not be overlooked. Although, as has been already stated, the respiratory centre possesses in itself the power of absolutely independent action, provision is made in its structure of a most remarkable kind for subjecting it to the modifying influence of external conditions, and particularly of conditions existing in the organs over which it presides. By means of a special nerve—the respiratory vagus (by which term may be designated those afferent fibres of the pneumogastric which are distributed to the air-passages)—the centre is constantly affected by the varying conditions of the respiratory organs in such a way that the relation which is thus maintained between the two parts (centre and organ) can only be spoken of as regulatory or compensatory, and cannot be compared with that which exists between a sensory surface and a reflex centre in the ordinary case of so-called reflex action. For here the influence which passes

from lung or bronchial tube to centre has no tendency to excite motion, but the contrary; its nature being such that —being comparable to that of a bridle, not to that of a spur—it can only be called inhibitory or regulatory. As to the nature, and still more the final cause, of this singular action of the respiratory vagus, although a great deal more is known than has here been pointed out, we have unquestionably much to learn.

In the power which the respiratory centre possesses of automatic rhythmical action; in the peculiar relation which we have seen to exist between its activity and the varying proportion of oxygen held in combination by the hæmoglobin of the blood; in that fine graduation of its channels of discharge, whereby it is enabled to widen its range of influence according to the requirements of the organism; and, finally, in the regulatory mechanism by which it is kept constantly *en rapport* with the organs of which it directs the movements,—we have a series of endowments which completely fit it for its function, and afford us a satisfactory explanation of all the phenomena of tranquil or exaggerated breathing so long as the normal rhythm is maintained.

There are, however, many well-known instances, both in health and in disease, in which muscular acts which are in effect respiratory are performed, to the understanding of which the mechanism of automatic respiration gives us no key. Of these acts many are unquestionably reflex—such, for example, as the inspiratory gasps which are induced by the sudden application of cold to the surface, or the sudden contraction of the diaphragm, which is the initial act of the complicated reflexes of vomiting, coughing, and sneezing. Other instances come under our knowledge experimentally in which sudden contraction of the diaphragm can be evoked by excitation of afferent nerves and particularly of certain afferent fibres contained in the vagus. All of them are, as I have said, in effect respiratory, for they result in inhalation, followed by expulsion, of air, but differ from normal respirations quite as much in their *mode* as in their origin. It is, I believe, characteristic of all reflex inspiratory acts that they are of extremely short duration, and that they are so immediately followed by expiration, that the latter seems, as it were, to cut short the former before its completion. For this reason, the English word gasp, in its ordinary and well-understood acceptation, fully comprehends the conception of reflex inspiration. The act of vomiting may be truly said to begin with a gasp, immediately followed, and as it were cut short, by contraction of the muscles of the abdominal wall; and so of the other instances. Another characteristic difference between the gasp and the rhythmical respiration is that in the former the auxiliary muscles of respiration do not take the same part as in the latter. In its simplest form the gasp consists in a spasmodic contraction of the diaphragm, differing in the most striking way from the deliberate manner in which that muscle draws its central tendon downwards in ordinary breathing, its fibres remaining in the shortened state during the whole of the respiratory pause. In other instances (whether from greater intensity of excitation or greater excitability of centre) the purely diaphragmatic gasp extends itself over a wide range of muscular actions, but the muscles thus brought into play are not those of inspiration. We have the best example of this in the well-known gasping inspirations which characterise the second stage of asphyxia, in which we see that each contraction of the diaphragm is but the starting-point of a general convulsion affecting the whole body of the asphyxiated animal, of which the most obvious character is expressed by the term usually given to it, "stretching spasm," for the muscles chiefly affected are the extensors of the trunk and limbs.

The space at my disposal will not permit me to enter so fully into this subject as I should like. It will be sufficient for my present purpose if it is understood that the automatic is distinguished from the reflex respiratory act—the sigh from the gasp—by well-marked characters. The two muscular actions have this in common. In both instances the combination of muscular movements is "led off" by the diaphragm, but the combination itself is so entirely different, that there can be no doubt that the co-ordinating centre from which those impulses originate which manifest themselves in spasmodic respiratory acts, whether accompanied with "stretching spasms" or not, is entirely different from that which regulates the rhythmical motions of ordinary respiration.

The preliminary experiments on which the following statements are founded were made for the purpose of investigating the influence of gelseminum on the movements of the diaphragm. This was accomplished as follows:—The animal (rabbit) employed having been narcotised by chloral, a small spatula (shaped like the handle of a teaspoon) was introduced into the peritoneal cavity through a small opening in the linea alba, and passed upwards in front of the liver until its convex surface rested against the under side of the centrum tendineum. The stem of this spatula was brought into connexion with a lever, by means of which its to and fro movement, and consequently that of the diaphragm, was inscribed on the cylinder. By this means graphical records were obtained of the diaphragmatic contraction before, and at successive intervals of three minutes after, the injection into the venous system of a fatal dose of gelseminum extract (six minims), or rather of such a dose as would have been fatal had not the result been warded off by the employment at the proper moment of artificial respiration.

The first effect of the injection is to augment the depth, but apparently not the frequency, of the respiratory movements. This condition (hyperpnœa) begins in from five to ten minutes, and is soon over. It is followed by a second stage, in which, on the whole, the diaphragmatic movement is diminished both in extent and frequency. This happens in accordance with the general principle applicable to most cases of toxical action, that paresis of a central organ is preceded by over-action. In this instance, at all events, it is certain that the diminished action is not due to exhaustion, for the previous hyperpnœa is far too inconsiderable.

On the whole, the diminution of movement is progressive; for, as has been already stated in previous papers, the final result is that the respiratory movements gradually fade away, but all our records show that the decline is invariably interrupted by intermediate stages, in which, to use old-fashioned language, the organism makes a struggle for the maintenance of life.

To understand how this happens we must call to mind that during the action of the drug the blood gradually becomes more and more venous. We should therefore expect that along with effects due to the purely paralysing influence of the drug on the automatic centre, others should mix themselves produced by the defect of oxygen and excess of carbonic acid.

The interruptions above referred to are precisely of this nature; they are due, as I believe, to the mixture of the asphyxial with the toxical element in the process, these being distinguished from each other, not only by their order of succession, but by their character; the first is but a weakened normal contraction of the diaphragm, the second a supplementary spasmodic effort of the muscle which ends as suddenly as it begins, and is immediately followed by an equally sudden recoil.

In other words, the same type of respiratory movement which presents itself in the beginning of the second stage of that form of asphyxia which is produced by the inhalation of a limited quantity of air without mechanical interference with the respiratory passages, and which has been described in the first part of this paper as spasmodic, mixes itself with normal breathing. The way in which this mixture takes place could scarcely be understood if we were to attempt to investigate it without the graphical method. With its aid there is little difficulty. The record shows that as the blood becomes venous the diaphragmatic descent is not, as normally, a continuous movement, but is broken into two stages or acts, separated by a period of inaction.

That this is the right interpretation of this remarkable phenomenon (of which some readers have no doubt seen the counterpart at the bedside) we can satisfy ourselves by very carefully observing the behaviour of the auxiliary muscles of respiration, particularly those of the larynx, at the same time that the diaphragmatic motions are indicated by the lever. By this mode of study we learn that those respiratory movements which are dependent on the automatic centres (e.g., the rhythmical movements of the arytenoid cartilages) keep time, not with the spasmodic ending, but with the automatic beginning of the diaphragmatic descent.

In most of the animals it was observed that the spasmodic element disappeared from the record as the toxical

process proceeded. In one, however, it attained so great a predominance that the tracing could not have been distinguished from one of the second stage of asphyxia. The record (Fig. 7) affords evidence of complete abolition of the normal element, but even here it could be seen, by watching the laryngeal movements, that the automatic centre was not entirely paralysed; for its inspiratory mandate, though it was neglected by the diaphragm, was punctually obeyed by the posterior crico-arytenoid muscles, which, at the proper moment, opened the glottis, fruitlessly of course, with the same precision as ever. As the expiratory closure of the glottis was immediately preceded by the spasmodic inspiration, it is obvious that this happened at a moment which, if respiration had been normal, would have coincided with the respiratory pause.

FIG. 1.

FIG. 2.

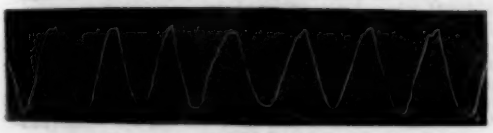

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

Fig. 1. Normal movement of centrum tendineum. The descending limb of each curve represents inspiration.
Fig. 2. The same six minutes after injection of six minims of extract (diluted) into the jugular vein.
Figs. 3 to 6 exhibit successive modifications of the record obtained in the same animal. In Fig. 3 the first descent expresses the normal, the second the abnormal (spasmodic) contraction of the diaphragm.
Fig. 7. Tracing obtained when the diaphragmatic contractions had assumed a wholly spasmodic character.

The further discussion of these facts must be reserved for a future paper. For the moment it will be sufficient to state that the drug acts on the respiratory function by paralysing the automatic respiratory centre; but that the process of extinction of the respiratory movements, which might otherwise be expected to be gradual and progressive, is prevented from being so by the intervention of disturbances of which the explanation is to be found in the imperfect arterialisation of the circulating blood.

ON

OBLIQUE FRACTURE OF THE HEAD OF THE HUMERUS.

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(*Concluded from p. 420.*)

THAT such an injury occurs there is no reason to doubt. The description in Guthrie's cases is sufficiently clear to warrant this conclusion. I am, besides, fortunate in being able to contribute four additional cases which have come under my notice, in some of which the advantages we possess in the present day of minutely examining such injuries under anæsthesia rendered it a matter of certainty that the injury described by Guthrie existed. They are as follows:—

6. (Reported by Mr. Wm. Fergusson.) Margaret S——, aged fifty, was admitted into Martha's ward, Aberdeen Royal Infirmary, on Dec. 30th, 1874, suffering from the effects of an accident sustained the previous evening. While walking on the pavement her foot slipped, causing her to fall against an adjoining building on the external posterior aspect of the left shoulder. She suffered a good deal during the night from pain in her shoulder. Her left forearm and hand were quite numb and devoid of sensation, and there was also considerable swelling of these parts.

On admission, the elbow was held a little away from the side, but could readily be brought into contact with it by gentle pressure. There was a good deal of swelling over the anterior aspect of the left shoulder, the swelling corresponding pretty much to the pectoral region of the deltoid muscle. The clavicle was entire, as were also the spinous, acromial, and coracoid processes of the scapula. The fibres of the deltoid were very tense. The deltoidal prominence on the outer side of the shoulder was obliterated. The acromion was prominent, but there was no vacuity beneath it such as is present in dislocation. The greater tuberosity did not rotate with the arm. On tracing the humerus from below upwards, it presented the appearance of passing upwards, forwards, and a little inwards from the insertion of the deltoid, to terminate in a small eminence below the coracoid process. The antero-posterior measurement of the shoulder was much greater than on the opposite side, and a groove existed in the region of the bicipital groove between the greater tuberosity and the prominence below the coracoid process. The independent mobility of these two parts showed that this groove indicated the line of fracture, and it was felt to pass obliquely downwards and a little backwards. There was neither elongation nor shortening of the affected limb. The coracoid process of the scapula was less distinct than on the right side, but was not unnaturally movable on raising and depressing the arm. The deformity could not be removed. The arm was immovable to the voluntary efforts of the patient, but movable to the examiner. The patient was able to flex and extend the forearm to a limited extent; on doing so she complained of pain in the region of the long head of the biceps; and on grasping the belly of the biceps while she attempted to flex the forearm the contraction of the muscle was scarcely if at all perceptible. The hand inside the axilla felt the head of the humerus in the glenoid cavity in connexion with the greater tuberosity, and rotation of the elbow communicated itself to the subcoracoid prominence. While rotating the arm hard crepitus was distinctly perceptible. The patient preferred to keep the forearm at about a right angle to the arm. Tenderness on pressure was complained of over the front of the shoulder and on the groove between the fragments. She complained of pain in front of the elbow on

attempting to flex the left forearm, and of a pain sometimes shooting along the track of the ulnar nerve from the axilla to the tip of the little finger, at other times shooting up from behind the internal condyle of the humerus along the inside of the arm to the axilla.

The whole of the affected limb, from the fingers to the shoulder, was enveloped in a starch bandage, which was continued to the root of the neck by means of the "shoulder spica." During the time the bandage remained on she continued to complain of the shooting pain, which gradually diminished. On Tuesday, Feb. 2nd, 1875, the bandage was removed, when she could move the shoulder-joint herself without much pain. The deformity in front of the shoulder still remained. The motions of the joint, as far as it was deemed advisable to try them, were unaffected. She was directed to keep the forearm in a sling for four weeks.

7. J. H——, a boy aged fifteen, had fallen a distance of ten feet on his left shoulder. He was a patient of Dr. Jackson's, and to him I am indebted for seeing him a fortnight after the accident. Dr. Wyness also took part in the examination, which was made under chloroform on the 15th of June, 1875. The left shoulder was green and blue from extravasation. The antero-posterior measurement of the shoulder was much increased, and to the eye this caused the affected side to seem larger from the tip of the shoulder to the sternum. There was one inch of shortening from the tip of the acromion to the external condyle of the humerus. The elbow was directed backwards and away from the side, but could easily be pressed into contact with it. The scapula, acromion process, coracoid process, and clavicle were entire. The axis of the humerus was directed too much forwards at the upper part. There was flattening but no vacuity below the acromion. There was no tension of the deltoid muscle. The hand in the axilla felt the head of the humerus in place in the glenoid cavity. At the level of the acromion process, between it and the coracoid process, but in a situation anterior to them both, was a bony eminence like the small tuberosity of the humerus, which had pierced the fibres of the deltoid so as to have become subcutaneous and press much upon the skin, but still in conjunction with the shaft and movable along with it. The head of the humerus did not move with the shaft. A groove existed between the head and the shaft, in the situation of the bicipital groove. No crepitus, but only soft cartilaginous rubbing, could be elicited by rotating or otherwise moving the arm. Reduction of the anterior fragment was attempted under chloroform with the heel in the axilla, and great force used by means of a skein of worsted fixed to the arm and placed over the neck; but no effect was produced. The injury was diagnosed as a fracture of the above nature, Drs. Jackson and Wyness being of the same opinion, and the shoulder was supported by a spica bandage, the arm and forearm being placed in a sling. On Oct. 9th the fracture had united, the deformity of the shoulder remaining unaltered; but the front fragment had reddened, and was threatening to perforate, the skin. Dr. Jackson concurred in advising its resection, and on Oct. 14th three-quarters of an inch of the small prominence were resected under chloroform, and proved to be the lesser tuberosity, as had been diagnosed. The case ultimately did well, but when last seen the upward motions of the shoulder-joint were considerably impaired.

8. Mrs. S——, aged thirty-two, was riding in a cab on the 7th September, 1875. Wishing to give some hasty directions to the cabman, she tried to make him hear by calling through the window, but failed to do so. She then opened the door of the cab while it was in motion, and jumped out. She struck her right shoulder in the fall, and hurt her right elbow, but was not stunned. She felt pain in her shoulder, but continued her drive until becoming "sickened" (no vomiting) with the pain she turned and drove home. When seen half an hour after the accident she lay in bed, the right arm at the side with the elbow somewhat backwards, the forearm at right angles to the arm, and the hand supported by the uninjured left hand. There was extravasation of blood under the skin over the right olecranon to a considerable extent, looking indeed as if the bursa there were filled with blood. Active movements of the shoulder-joint could not be effected. She was put under chloroform and carefully examined by Mr. James Neil (then my clinical clerk) and myself, and we both arrived at the same opinion regarding the injury she had sustained. The clavicle and scapula were both uninjured; the acromion and coracoid processes entire. Antero-posterior diameter of the shoulder much increased. A small bony prominence was perceptible through the soft parts below and a little external to the coracoid process, and rotating with the elbow. It was evidently the smaller tuberosity of the head of the humerus lying further forwards than natural, not having pierced the deltoid, still in conjunction with the shaft, and separated from the head by a fissure occupying the situation of the bicipital groove and running downwards and backwards. There was little or no pointing of the acromion, and the greater tuberosity could be felt immediately underneath it. From the axilla the head could be felt in the glenoid cavity. No crepitus could be elicited by drawing the shaft of the humerus outwards away from the side, but it was very plain on rotating the humerus, on pushing it up and down in the direction of its long axis, or on putting the hand on the top of the head. Rotation of the shaft was not communicated to the head of the bone. Passive movements of the shoulder-joint were free. There was little or no shortening of the arm as measured from the acromion to the outer condyle. There was no mark of contusion about the shoulder, and no tendency to an increase of the displacement. The elbow could easily be placed in contact with the side.

A thin pad was placed in the axilla; the hand, forearm, and shoulder were retained immovable by a starch bandage, which held the forearm at right angles to the arm, bound the arm to the side, and was fixed beneath the opposite axilla by the shoulder spica. When she left for the south a fortnight later the displacement remained unaltered, but union was already commencing.

9. The remaining case was one I had the opportunity of examining in the Hôtel Dieu, under the care of M. le Dentu, during a visit to Paris in September, 1874. I am indebted to the great kindness of M. le Dentu for permission to reproduce his notes of the case, which formed the subject of a communication that he read to the Société de Chirurgie of Paris on the 25th January, 1876. These notes I have somewhat abbreviated.

"*Rare Fracture of the Surgical Neck of the Left Humerus at its highest part; considerable displacement, upwards and forwards, of the upper end of the shaft; incomplete laceration of the deltoid; delayed union.*—A young man, aged seventeen, a porter in the Halles Centrales, met with a fall on the night between Sunday the 23rd and Monday the 24th of August, 1874. He was at the time carrying across his shoulders a bag weighing forty kilogrammes. His left shoulder came into violent contact with the ground. On rising, he observed that the left arm was incapable of executing any movement; it hung powerless by his side, with the elbow directed somewhat backwards and outwards: this attitude he remembers perfectly. On the morning of Monday, the 24th, he was admitted into the Hôtel Dieu, under the care of Professor Richet, where the following peculiarities were noted:—The left shoulder was considerably swollen, so as to be almost globular in shape, the swelling greatest anteriorly and externally. Inferiorly the swelling did not extend beyond the insertion of the deltoid, and it was bounded above by the clavicle, acromion, and spine of the scapula. The skin generally had a bluish colour, and was marbled in several patches by recent ecchymoses. The tumefaction showed, on palpation, the characters of extravasated blood (softness, fluctuation, crepitation). On pressing on the skin in front of the joint, there was felt, below the clavicle and external to the situation of the coracoid process, a hard bony projection, whose bulk and form, owing to the swelling, could not be exactly determined. One thing was certain—namely, that it was the end of some fragment of bone; but whether it was the head of the humerus or the end of a splinter of the humerus could not be made out by direct palpation. In the axilla there was nothing special; no projection to be felt. Owing to the tension of the skin externally and posteriorly to the shoulder preventing its being depressed, a complete exploration of the joint was impossible; but in the depth, where the head of the humerus should be, there was a feeling of deep resistance to the finger. The examination of the shoulder was rendered more than usually difficult by the swelling, which bulged out beyond the acromion in every direction. The arm was somewhat abducted, with the elbow directed a little backwards. Active movements impossible. Passive movements could be effected without much difficulty, ex-

cepting abduction, which caused pain, and circumduction, which was possible only to a limted extent. On pressing the elbow upwards, the bony projection below the clavicle was rendered more prominent, and it was moreover found to follow all movements communicated to the humerus. There was no crepitus. The arm was two centimetres shorter than the other when measured from acromion to epicondyle.

"Aug. 26th.—Swelling increased; fifteen leeches applied to the deltoid region.

"29th.—Swelling much less; head of the humerus felt distinctly in position, and it is clearly the superior extremity of the shaft which is felt projecting: its bulk is less than that of the head of the humerus, and it wants the rounded form; the fragments are nowhere in contact; reduction of the displacement attempted by elastic extension with india-rubber bands.

"At the end of ten days the shortening had not diminished. An immovable apparatus was applied, and when it was removed, on the twenty-fifth day after the injury had been received, the swelling had disappeared, the bicipital groove was to be felt on the projecting point of bone, and there was one centimetre of shortening. A renewed attempt at reduction, in which a traction of sixty kilogrammes was employed, produced no change in the position of the shaft. The movements of the shoulder remained very imperfect on the 15th November, at which date union was found to have taken place."

To this clear narrative I would add that M. le Dentu considers the case as fracture of the humerus in the immediate vicinity of the anatomical neck. When I saw and repeatedly examined the patient, the case was clearly analogous in its symptoms, and in the size and form of the subclavicular projection, to the other cases I have narrated above. I find in the notes I made of the case mention of increased antero-posterior measurement of the shoulder, and that the bony projection had the feeling of being subcutaneous.

The foregoing cases seem amply sufficient to prove the actual existence of such a fracture as was asserted by Guthrie, and to remove the doubts cast on his conclusions by Smith, Flower, and Hulke. Although no post-mortem examination has been quoted in corroboration, the resection of the lesser tuberosity in Case 7 is almost as conclusive, for if any but the smallest portion of the articular part of the humerus had been attached to the fragment, resection to the extent of three-quarters of an inch would have been an impossibility. A glance at a normal humerus will convince anyone of this.

There exist, then, in the first place, obliquely longitudinal fractures of the upper part of the humerus, as described and dissected by Smith, where the lesser tuberosity, along with the greater part of the head, is separated in conjunction with the shaft, from the greater tuberosity in conjunction with a small part of the head, the fracture occupying the situation of the bicipital groove.

And there exist also, in the second place, cases where the articular portion of the humerus is detached in conjunction with the greater tuberosity (as asserted by Guthrie) by a fracture running obliquely downwards and backwards, the line of fracture occupying at its upper part the situation of the bicipital groove. The lower fragment is formed by the shaft in conjunction with the lesser tuberosity. Such an injury is usually produced by a fall on the shoulder, and it exhibits characteristic symptoms. These are increased antero-posterior diameter of the shoulder; prominence of the lesser tuberosity at the anterior part of the shoulder, the prominence obeying all motions of the shaft; the existence of the head in the glenoid cavity, not moving with the shaft, save only to a limited degree, with very extensive movements of the arm; crepitus, sometimes absent, best elicited by rotating the shaft or pushing it up and down in the direction of its long axis; powerlessness of the arm to the patient, but pretty free mobility to the surgeon; and a position of the arm not unlike that of a dislocation, but the elbow capable of being readily pushed into contact with the side. The shortening of the arm may be present or absent; it is present when the smaller tuberosity has pierced the fibres of the deltoid. The deformity cannot be entirely reduced, but the injury leaves a useful arm in spite of the deformed shoulder.

It is rather astonishing to find, in both series of cases, the marked impossibility of removing the deformity by any means whatever. In the present state of our knowledge of the subject it seems probable that this is owing to the *tendon of the biceps slipping into the cleft between the fragments.* The line of fracture would almost necessitate such a displacement, and it will be observed that Smith has depicted, in the preparation of Julia D——'s shoulder-joint (4), the tendon as lying between the fragments. Its position in the cleft would render reduction exceedingly difficult, if not impossible, and would also account for the occasional absence of crepitus as a sign of these injuries. It is much to be desired that pathological anatomy should step in to clear up what remains uncertain concerning the whole subject.

Aberdeen.

CONTRIBUTIONS TO AURAL SURGERY.

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No. IV.—ON THE DIAGNOSTIC VALUE OF MORBID APPEARANCES IN THE TYMPANIC MEMBRANE.

IT would be very difficult to find a more remarkable instance where careful observation of morbid changes can help to illustrate the uses of individual parts of an organ than occurs in the case of the tympanic membrane. It would be still more difficult to cite examples where more mistakes have been made in respect of such changes as immediate causes of impaired function. Even at the present time one hears it often enough said of a child (EX. 1) who has become completely deaf after scarlet fever, or an attack of inflammation of the tympanum due to some other cause, and accompanied by total loss of the tympanic membranes, that he is deaf from perforations of the membranes. But, again, another child or adult (EX. 2) with a similar complete loss of the membranes is the subject of impaired hearing of so slight a character as to occasion little or no inconvenience, and only noticeable when subjected to careful tests; whilst another (EX. 3) with the same lesion is very deaf, and regains most satisfactory hearing by wearing a contrivance to which the term has been applied "artificial membrane." The explanation of this effect which was originally offered was that the improved hearing was due to the fact that this contrivance confined the vibrations of sound to the tympanic cavity, and thus performed in part the functions of the natural membrane. If this were a correct view of the matter, why should this method so frequently be found quite useless when, instead of so great a loss of tissue, there is only a small perforation? In truth, experience shows that where the perforation is minute, it is even more usual to meet with extreme deafness than when it is larger, and that the artificial closure of the perforation only causes increased deafness. Those who are in the habit of treating cases of perforation of the tympanic membrane are now well aware that in suitable examples the success or failure which attends artificial support, however applied on to the tympanum, depends solely upon the degree of exactness with which the precise spot requiring pressure is discovered, and that, in fact, as soon as the patient has acquired facility in using aid of this sort to hearing, he can at any time, with the help of forceps and a small probe, so adjust a piece of moistened cotton-wool that the requisite pressure is exerted on the stapes. In such instances, then, it is quite obvious that the impaired hearing is due simply to a defect in the normal amount of tension throughout the ossicles, and so on to the fenestra ovalis. It is equally just to suppose in those cases where this expedient fails after fair trial, that the loss of hearing is due to disorganisation in the tympanic cavity beyond what can be accounted for by the change in tension above-named. That the loss of the membrane, *per se*, can have caused this is at once negatived by the consideration of EX. 2. From the result of previous well-known dissections it may be presumed that this further disorganisation takes the form of a general thickening of the lining membrane of the tympanic cavity, as well as other changes elsewhere described. The probable truth of this explanation is made more apparent, when the opposite

ear is perfect, by the fact that the vibrations of sound conveyed through the cranial bones are heard better by the affected than by the other (healthy) ear; for in this case the increase in the perception of sound would seem to be caused by some obstruction in the tympanum which interferes with the outward passage of sound through this cavity. At any rate, it is manifestly incorrect to attribute all the deafness met with in perforation of the tympanic membrane to that part of the morbid condition which a superficial examination at once discloses.

To take another illustration of the loose way in which cause and effect are spoken of in relation to one another. What more common than to hear it said of a patient who is more or less deaf on one side that he has "thickening of the membrane" (meaning the tympanic membrane)? How true an explanation of his malady this may be can be judged from the following:—An adult is found to have a large calcareous deposit in both tympanic membranes, is quite deaf with one ear, and has imperfect hearing with the other. Another patient is obviously deaf from nervous causes in the right ear, and on examination of the left ear, with which the hearing is perfect, it is found that the membrane is the seat of large calcareous deposit; whilst a third, with still more extensive deposit of a similar kind in both membranes, hears quite well on both sides. Each of these examples I have myself observed. Surely in any one of them there is sufficient "thickening of the membrane" to account for any degree of deafness, but it is nevertheless plain enough that this symptom is in no way due to such a cause. In the face of this may we not be justified in supposing the failure in conduction of sound to be due (as in the case of perforation) to morbid changes behind the membrane? Do not facts like these still further point towards the necessity which exists for some modification in the views popularly held of the functions of the tympanic membrane, at least so far as its vibratile properties are concerned? It seems not easy to understand how the vibrations of this membrane, so thickened and changed by disease as we see it sometimes, can be a very essential factor in the function of good hearing, and is not this what is generally taught in physiological text-books? For instance, it is explained in that charming little work of Mr. Huxley's on Elementary Physiology that those aerial waves (produced by the vibrations of sonorous bodies) which enter the meatus, impinge upon the membrane and *set it vibrating*; that the vibrations set up in the membrane of the tympanum are communicated in part to the air contained in the drum of the ear, and in part to the malleus and thence to the other auditory ossicles. We are not here concerned with the effect of the vibrations communicated by these routes to the fenestra ovalis on the one hand, and to the fenestra rotunda on the other. But to take the two cases above quoted, the one in which the ear has entirely lost the membrane by ulceration, and the other in which the membrane has become metamorphosed by calcareous degeneration, nearly perfect hearing remaining to each, must we not almost put out of consideration the *vibrations of the membrane* which intervene between the aerial waves in the meatus on the one side, and the vibrations of the ossicles and the vibrations in the air contained in the tympanic cavity on the other? In short, the functions of the membrane as a medium in sound conduction wellnigh disappear, whilst its functions as a support to the chain of ossicles and as a protection to the tympanic cavity become proportionately more noticeable.

Whatever truth there may be in this mode of reasoning makes it tolerably plain that to talk of a slight thickening of the membrane, or a small perforation, as a cause of extreme deafness, implies a misapprehension of the diagnostic value of such pathological changes. This is made still more apparent, as regards perforation of the membrane, by the consideration of cases reported in THE LANCET of May 29th, 1875, where some accidental ruptures of the membrane were not attended by any appreciable loss of hearing power.

A due regard to the value of appearances in the tympanic membrane, far from inducing a superficial examination of this part, should make inquiries in this direction the more exhaustive, so that changes from health may become the marks on an index telling of still further changes beyond. Thus, a loss of translucency and lustre in the membrane points at once to catarrh either past or present. If past, either recovered from or having left impaired hearing, which tells truly of induration in the lining membrane of the tympanum; if present, showing surely that secretion has lately or is still taking place, and so calling for immediate treatment. Beyond all other changes in the tympanic membrane in diagnostic value and as a guide to treatment, are deviations from the natural plane of the membrane. A passing or permanent obstruction of the Eustachian tube cannot fail to leave its mark on this structure by the increase of its curvature and alteration in position of the malleus. No less important are the partial or complete collapse of the membrane, increased mobility on inflation of the tympanum, as well as thinning of the membrane in parts, together with bulgings and bladder-like protrusions. All these appearances and many more mark in language plain and intelligible the results, and for the most part remediable results, of catarrh of the middle ear.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

HÆMORRHAGE INTO CEREBELLUM AND OTHER NERVOUS LESIONS IN A CASE OF HEART DISEASE.

(Under the care of Dr. ANDREW.)

FOR the following interesting and valuable notes we are indebted to Vincent Harris, M.B., house-physician.

F. D——, eight years old, a somewhat poorly-nourished boy, was admitted into Mark ward on Oct. 8th, 1875, for subacute rheumatism. His mother stated that he had had pains about him for a month before admission, with swelling of the left ankle and redness; that about a week after first seizure he had first complained of frontal headache, which had continued since, and latterly of dimness of vision. On examination, very slight swelling of the left knee, with little pain and no redness, was discovered. The heart was found to be hypertrophied, and a loud rasping double murmur was heard, most plainly at apex of heart. Pulse 108, full, soft, and regular; respiration 30; temperature 101·6°.

The boy was kept in bed, and, no doubt on account of the rest, during the next few days got rid of a good deal of palpitation of heart, of which he had complained, and of his headache; but the latter was still severe. His temperature continued to be raised, and to vary between 101° and 102°, until the 18th, when it suddenly went up to 104°; his other symptoms corresponded, and he was decidedly worse; headache, principally frontal, was increased; the pupils unequally dilated, the left more than the right; capillaries of face, neck, and thorax appeared distended; the abdomen was noticed to be retracted, and his bowels were obstinately constipated. About this period he commenced screaming out at nights, disturbing the patients in the ward. He said he screamed because of his headache. This continued off and on for many weeks. An ophthalmoscopic examination made of his eyes on the 25th showed that the discs were swollen (the right more than the left), dim, edges ill-defined and hazy, and the veins were large and tortuous, but no hæmorrhages were detected.

There was no material change in his condition for some weeks. The principal points noticed during the time were that he was generally fairly cheerful in the daytime, but as night came on his head began to ache, and nearly every night he cried out a good deal; the veins over the temples became very plainly marked, and the venules of the cheeks were chronically congested. His pupils varied, but were generally dilated. He took food fairly, but vomited occasionally; his bowels had to be relieved by enemata. Once or twice there was tenderness over splenic region; enlargement of spleen with raised temperature, so that infarcts

in the spleen were diagnosed. On Nov. 6th there was drawing of the mouth to the right and slight convergence of the eyes; whether there were other signs of facial palsy but the drawing of the mouth was not certain. He complained of feeling giddy, of dimness of sight, and also of buzzing in the ears. The discs on the 10th were more indistinct.

Nothing of importance was noticed until the early part of December, when it was thought that the condition was improved; at any rate, the boy did not not seem so stupid and dull as he had been, his appetite was better, and he called out less at night. There seemed, however, to be more marked drawing of the mouth. He vomited excessively on the 4th and two following days.

On December 20th the discs were found to be swelled and bluish grey, outline blurred, vessels obscured in places. On the left side were some buff-coloured effusions around the disc. The note of the day states that "he wets the bed nightly." Was found to be much worse on Christmas-day; had no fit, but gradually became semi-conscious, groaned while asleep, and passed his motions in bed. The next day took no notice of anybody, but put out tongue when asked loudly, and swallowed well. Pupils large, but equal. He remained much in the same state until the 31st. His temperature varied from 101° to 105°, and pulse from 120 to 150. It was then noticed that, in addition to the drawing of his mouth to the right, there was right external squint, and rigidity of the upper extremities. Whether there was paralysis of the lower extremities appeared doubtful, but all the excreta were passed in bed. On January 2nd unconsciousness was complete; the left upper and lower extremities began to swell (he was lying towards the left). The skin was noticed to be much pilated. Two days after, patches of purpura began to appear, and there was considerable bleeding from left ear. The purpura increased on the 5th and 6th, and was pretty general over the body. On the 6th his right leg swelled, and early on the morning of the 7th the patient died, no new symptom having appeared.

During the whole course of the case there was nothing abnormal about the urine, and when there was vomiting the tongue was fairly clean. At the latter end there was a good deal of cough and catarrhal sounds in the lungs. As far as could be made out there were no other or different signs of nervous lesion. Whether sensation was impaired appears doubtful; it was not so long as *complete* consciousness remained. The heart-murmurs were loudly heard, even to the last.

Autopsy. eight hours and a half after death.—Body much emaciated; several large purpuric spots on both legs, especially on inner surface, and largest on left leg; also a number of small miliary hæmorrhages on chest and elsewhere.—Head: Calvaria thin; dura mater presented a normal appearance externally, but the inner surface covering the right hemisphere and lining the right middle fossa was discoloured a brownish-yellow by old extravasation. Some increase of fluid in the brain. Over the right half of the cerebellum some soft, partly congealed blood, small hæmorrhages over both hemispheres, and a continuous patch of ecchymosis along the margin of right temporo-sphenoidal lobe; corpus callosum much arched; both ventricles greatly dilated and containing much fluid; substance of right hemisphere very greatly softened, also the corpus striatum and optic thalamus, more especially the former; a large, rather recent embolism in right middle cerebral artery at its entrance into Sylvian fissure; vessel at that point covered with a patch of recent lymph. Cerebellum softened and disorganised; a large hæmorrhagic cavity in right half, extending partly into left, had come to the surface on right side; the blood in it was semi-fluid and dark, the cavity, surrounded by yellow smooth-looking brain-substance, presenting a cellular structure microscopically, probably brain-substance discoloured by blood-clot. No thrombus of sinuses or ruptured vessel, from which the blood came, to be found. —Heart: Small purpuric spots covering the peri- and endocardium; some hypertrophy of left side; mitral valves covered with masses of fibrinous vegetations, which hung down pendant-like into the ventricle, and extended up on the inner side of auricle. Aortic valves competent. Spleen adherent to peritoneum; about a dozen large, old, and recent hæmorrhagic infarcts. Liver soft, nutmeggy, peculiarly and regularly speckled with yellow spots. Kidneys with old and recent infarcts; structure fairly distinct. Purpuric spots on peritoneum and mucous membrane of intestines. Lungs rather solid from œdema, otherwise normal. Hæmorrhages under visceral pleura.

KING'S COLLEGE HOSPITAL.

DISEASE OF THE ELBOW-JOINT; INCISION; EXCISION; RECOVERY.

(Under the care of Mr. HENRY SMITH.)

FOR the notes of the following case we are indebted to Mr. Barrow, late surgical registrar.

Thomas P——, aged four, was admitted March 19th, 1875, with disease of the left elbow-joint. His parents are very delicate and constantly ailing, but none of his relations are consumptive. He has always been a very delicate child, and has had a severe attack of whooping-cough within the last year. Ten months ago he fell out of bed and injured his left elbow, which immediately swelled and became very painful. After a short time the pain in a great measure subsided, but the swelling persisted, and as it seemed to be increasing, the child was placed, seven weeks before admission, under the care of Mr. Smith as an out-patient, when a free incision was made into the joint, and a quantity of pus allowed to escape; the limb was placed upon an angular splint, and cod-liver oil and iodide of iron were ordered. Entire subsidence of the pain followed, but pus continued to escape from the opening.

The child, on admission, had a very pale and exhausted aspect. The joint was considerably and uniformly enlarged, the swelling being solid and fleshy in character, and not fluctuating. There was an oval-shaped opening to the outer side of the olecranon, almost entirely filled up by pale fungous-looking granulations, from which a thin, oily pus escaped. The arm was flexed at an obtuse angle, and its movements were very limited and painful. No crepitus could be felt.

The splint was reapplied so as to bring the arm nearly to a right angle with the upper arm, the wound covered with plain dressing, a liberal diet allowed, and the oil and iron continued. This treatment was persevered in for three weeks, but, the child's health gradually failing, and no signs being discoverable of any reparative process in the elbow, Mr. mith at length determined to excise the joint, which operation he performed April 10th through a single straight incision along the posterior aspect of the limb. The condition of the joint was found to be as follows. The synovial membrane was completely replaced by a thick, semi-transparent gelatinous substance, which, upon microscopical examination, was seen to be composed of numerous small round cells imbedded in a slightly fibrillated homogeneous matrix. The articular cartilages were ulcerated in patches, the extremities of the bones somewhat congested, and the ligaments so much softened as scarcely to be recognised.

No unfavourable symptoms followed the operation, but the child's health began immediately to improve, and the wound rapidly to heal, so that passive motion was soon commenced, and the child left the hospital on June 3rd in comparatively perfect health, and with a fairly movable limb, with directions to attend as an out-patient.

WEST LONDON HOSPITAL.

CASES ILLUSTRATING THE TREATMENT OF ACUTE ORCHITIS BY PUNCTURE.

(Under the care of Mr. ASTLEY BLOXAM.)

WITHOUT attempting to discuss the general question of the treatment of acute orchitis by means of puncture, it may be remarked that records like the following are of more value than much of the irrelevant matter in the recent discussion.

CASE 1. *Urethritis; acute orchitis; puncture; recovery.*—John G——, aged twenty-two, a waterman, was admitted on Jan. 17th. He stated he had three weeks ago a profuse discharge from the urethra, which had gradually decreased until three days before, when it entirely disappeared; the next day, however, the left testicle became painful and swollen. On admission, no urethral discharge existed; the scrotum was tender, distended, and reddened; veins enlarged, and the subcellular tissue œdematous; the

epididymis nodular and greatly distended. The pain was intense; so extreme, indeed, as to prevent him sleeping for the previous two nights, and was referred to the loins, groin, and iliac region, and of the usual dull aching character. Pulse 120; temperature 103°, with considerable inflammatory fever; bowels constipated. Mr. Bloxam punctured the testicle with a trocar and canula, passing the trocar into the testicle for about half an inch. At first two or three drops of blood escaped; the canula was then slowly withdrawn, to see if any fluid existed in the cavity of the tunica vaginalis, and as this was done about three drachms of serous fluid escaped. The canula was then removed, and the testicle was well supported in bed. Low diet, a lotion of lead and belladonna, and one-eighth of a grain of tartrate of antimony, with a drachm of sulphate of magnesia, every four hours, were ordered.

Jan. 18th.—Scrotum and testicle half the size. Pulse 84; temperature 100°. Half an hour after puncture with the trocar he was free from pain, and has had no return since.

21st.—Testicle nearly normal in size and soft; œdema of scrotum gone, no pain, no urethral discharge. On the most careful examination, no irregularity of surface can be detected where the testicle was punctured. He was discharged and made an out-patient.

Feb. 17th.—Has frequently attended as out-patient. Slight discharge from urethra recurred on the eighth day after puncture, which, without any direct treatment, disappeared, and the left testicle is now in all respects identical with the right.

CASE 2.—*Gonorrhœa; acute orchitis; several punctures made with a triangular needle into testicle; recovery.*—James C——, aged eighteen, a carter, was admitted on Jan. 17th. He stated he had discharge for two weeks. Three days before applying at the hospital he was seized with pain in the loins and left testicle, and at the same time the urethral discharge diminished. On examination, the scrotum and testicle presented much the same appearance as in the preceding case, but he suffered less pain, and had less inflammatory fever.

Several punctures were made with a triangular needle into scrotum and testicle. The man did not suffer much, and a considerable amount of serous fluid escaped from the punctures. Ordered similar treatment as in previous case, but he was made an out-patient.

Jan. 20th.—Stated all severe pain left him in the evening of the day of puncture. Testicle and scrotum much decreased in size. Slight discharge present.

24th.—Discharge very profuse. Testicle the same size as right. No pain. Ordered copaiba mixture three times a day.

31st.—Since last seeing him the discharge had nearly ceased, and no difference exists between the two testicles.

Mr. Bloxam observed he had in about fourteen cases considered it advisable to employ this method of puncturing the testicle, not splitting, as had been erroneously said to be Mr. Henry Smith's plan of treatment. In none had he seen the slightest ill result follow. As far as he could judge it was an exceedingly useful mode of treatment when acute pain and inflammatory fever existed, as relief could be promised within a few hours, and when, again, it was impossible for patients to take entire rest at home.

HÔPITAL ST. LOUIS, PARIS.

SARCOMA OF THE ABDOMEN; RECOVERY.

(Under the care of M. PÉAN.)

H. R——, aged twenty-two, married, and mother of three children, said that in the month of June of last year she had noticed a swelling about the size of a walnut, situated in the region of the left anterior and superior spine of the ilium. She continued to work as usual, and did not suffer in the least. Her appetite remained good, and she did not think that she had grown thinner. In the month of November last she was confined for the last time, and her courses returned five weeks after, and have never ceased to be regular; heart and lungs normal. The father of the patient is still alive, and upwards of sixty years of age. Her mother died at the age of fifty of ovarian dropsy. No history of syphilis.

On admission, the patient had a fair complexion, was of a lymphatic temperament, and appeared well-nourished. She ate and digested well. She had no œdema of the left leg. She did not suffer in the least. Upon examining the abdomen it was easy to detect a large tumour, situated to the left of the median line, which projected over the superior part of the thigh. It was limited by a line passing through the umbilicus above, and below it extended down to the groin. It was of an ovoid shape, and seemed to be adherent to the spine of the ilium. The hand could easily be passed underneath it. Movements of all sorts were possible at the internal extremity of the mass, but outside it appeared to be adherent. The skin rolled easily over it. The uterus was movable, and the inferior extremity was turned towards the left.

Feb. 19th.—The patient was operated on by M. Péan. A curved incision, passing above the groin, was made to extend through the skin, the cellular tissue, and the muscles. The tumour was then laid open, and the enucleation performed by breaking down some slight adhesions with the peritoneum at the external extremity, as well as at the spine of the ilium. The peritoneum was left untouched during the whole operation. The two edges of the wound were then brought together by a wire suture.

20th.—The patient slept all night, and appears in excellent spirits this morning; does not suffer in the least. Temperature, 37·2° Cent. (morning), 38·2° Cent. (evening); pulse 108.

22nd.—The patient continues to sleep well, but complains of a feeling of sickness this morning. The abdomen, however, is not sensitive to the touch, nor has she any headache. Temperature, 37·4° Cent. (morning), 38·2° Cent. (evening); pulse 114.

25th.—The feeling of sickness has disappeared; the patient begins to have some appetite. The wound has healed by primary intention at the inner part, where there is no drainage-tube; there is a slightly red blush around it. Temperature 37° Cent.; pulse 96.

28th.—Wound looking very healthy; hardly any discharge. The silver wires are taken off to-day. Nearly the whole length is healed. Temperature and pulse normal.

March 6th.—The patient is thoroughly convalescing, and is about to leave the hospital for the country.

Upon putting a portion of the tumour under the microscope, it was found to be a sarcoma of the fascicular kind. The rapidity of its growth and its existence in so young a person are both points of great interest. Another noteworthy fact in the case is the apparent good health of the patient, and the fact of her being confined without any accident whilst bearing a tumour, which was about the size of the head of a fœtus.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE ordinary meeting of this Society was held on the 28th ult.; the President, Sir James Paget, in the chair. The whole time was taken up by the reading and the subsequent discussion of a lengthy communication by Dr. G. Thin, embodying results of some recent researches into the development of epithelioma, by which he affirms that the new formation of epithelioid cells takes place by the direct transformation of wandered white blood-cells. The only speakers who ventured to criticise these novel views were Messrs. Hulke and Butlin. It was, however, as Dr. Thin pointed out, obviously impossible for anyone to oppose a direct negative to his statements, seeing that his observations were made upon preparations hardened in osmic acid, a reagent not very often used for general histological purposes.

The following is an abstract of Dr. THIN'S paper, entitled "On some of the Histological Changes found in Cancer of the Skin or Epithelioma, with special reference to the source of the newly-formed Epithelial Cells":—The epithelial growth in cancer of the skin is constituted by an extension

of the epithelium which normally forms the rete Malpighii, the sweat-glands and the sebaceous follicles, and does not take its origin exclusively in the lymphatic vessels, as has been alleged by Köster, and latterly by Rajewsky. As new epithelial cells form, those in the centre of epithelial masses or on the outer surface of the rete undergo several kinds of degeneration. The two chief forms of this degenerative process are the horny and the colloid. In the former the cells elongate, flatten, become horny, and finally resemble pieces of membrane; in the latter they swell and acquire an even, glassy appearance. A laminated capsule is frequently formed by several of these swollen vitreous-looking cells, which are encircled by the flattened horny ones. In both forms the cells finally disintegrate in their original position. They are not found as cellular elements in the underlying tissue. The nuclei undergo changes corresponding to those of the cells. The nucleus generally withers or falls out; it never divides. The nucleolus frequently enlarges and acquires a colour not unlike that of a red blood-corpuscle. It is then a prominent and resistent object, and has undergone a change, by which it is assimilated to horny structures. Instead of one large nucleolus in the nuclear vacuole, there are sometimes two or four smaller nucleoli, which appear to be fragments of a large nucleolus. The cells never divide nor produce endogenous progeny, nor give origin in any other way to new cells. No vital process is in any way connected with the changes which they undergo. The fibrillary tissue yields to a process of absorption, which begins at an early stage and is independent of the epithelial formation. The absorption is divisible into two stages. In the first the bundles retain their form, although the substance has to a considerable extent disappeared, thin membranous lines indicating the boundaries of each bundle. In the second, the outlines of the bundles are lost, and the tissue is represented by irregular shreds. In osmic acid preparations large oval nuclei, faintly marked, are seen in the bundles. These are believed to be the nuclei of flat cells, and their resistance to the solution is supposed to be produced by a change which is due to the cancer. Stellate and spindle cells can be seen in the corium and amongst the cancerous epithelium. Their cell protoplasm is frequently found in a state of fatty degeneration. In favourable preparations the nature of these cells is shown by long, thread-like processes which proceed from them. Passing from the epithelium inwards there is an abundant infiltration of cells. Where the fibrillary tissue is broken down these are found in masses. These masses are continuous, with rows of cells that pass between the bundles. Single rows of cells are often found between unaltered bundles, and where the tissue is otherwise healthy. The cells nearest the epithelium are larger than those more distant from it, and have a nucleus and a form that indicate a change towards the fully developed epithelial character. Gradual transitions connect these with the more distant cells, which finally are indistinguishable from colourless blood-corpuscles. It is maintained that they are colourless blood-corpuscles because they are identical with them in appearance, and because they do not proceed from the epithelium or the cells of the tissue, and because the vessels in the part are found to contain a number of similar corpuscles. The epithelial growth takes place by simple apposition of these lymph-cells to the pre-existing epithelium and by the spaces left by the degeneration of old cells being occupied by the new ones which fix themselves in the position. The nature of the agent by which these changes are produced is unknown. It evidently passes from the diseased part along the lymph spaces, and a cell once infected by it becomes an active agent in conveying the infection to the next cell in contact with it, and so on successively. It becomes weaker the farther it travels. As the products from the bloodvessels do not organise, and as the wound resulting from an operation in the part heals well, it follows that the *materies morbi* is localised. On the other hand, as cancer is not inoculable to a healthy person, it is argued that the disease progresses by help of diminished power of resistance in the constitutional condition of the patient. The preparations on which these views have been more especially founded were obtained from cases of cancer of the lip in females operated on by Mr. Bell of Edinburgh. They were taken from sections of the tumours which had been put fresh in solution of osmic acid. The author attributes special weight to this mode of preparation, and believes that it presents advantages over any other method at present known to us. Dr. Thin expressed his thanks to Mr. Bell, of the Edinburgh Royal Infirmary, for providing him with the specimens for examination.

Sir JAMES PAGET remarked that the specimen of cancer examined by Dr. Thin was from the female lip. This was very exceptional, and he inquired whether there was any peculiarity in the situation or appearance of the growth. He had only once seen cancer of the lip in the female, and then it did not occupy its usual site, but was seated at the angle of the mouth.—Dr. THIN replied that Mr. Bell had seen, in all, seven cases of epithelioma of the lip in women, who were in the habit of smoking short clay tobacco pipes. —Dr. DRYSDALE pointed out the difficulties in the differential diagnosis between cases of indurated chancre of the lip and epithelioma. He recalled one case in which excision was practised of what he firmly believed was a syphilitic sore. There was a much enlarged gland beneath the jaw. On the other hand, he had met with a case of epithelioma of the lip in a woman.—Dr. JOHN HARLEY had seen Dr. Thin's preparations, and thought that they fully bore out the descriptions of them given in the paper. The series of preparations showed plainly, to one who viewed them without any preconceived ideas, that the morbid growth was derived from the lymph-corpuscles.—Mr. HULKE thought that there were considerable difficulties in the way of accepting these new views. There was, first, the difficulty in believing that these new products were simply out-wandered white blood-corpuscles, in there being no material difference between these new cells and those which were formed from the epithelium. He asked Dr. Thin to examine cases of ichthyosis of the tongue, when the tongue bears for years upon its surface a white horny patch of prolif.rated epithelium. Such cases, in his experience, invariably terminated in genuine epithelial cancer, which runs a rapid course; examination showing that the epithelium has descended into the deeper parts of the organ. Some examples of papilloma showed the same thing, which, on becoming epitheliomatous, were characterised by the downward growth of the epithelial elements into the deeper parts. Then again cases of rodent cancer, where the new-formed tissue was the seat of gradual ulceration, were made up of cells which could not be distinguished from the small round cells of the rete mucosum. Other cases of rodent cancer, more resembling epithelioma in their clinical course, presented microscopically transitional characters between the two—viz., larger epithelioid cells in addition to the round elements. He did not think that in these examples the newly-formed epithelial elements could be traced to any other source than the pre-existing epithelium, and he could not help accepting as a general rule the maxim that "like begets like." He agreed with Dr. Thin as regards scirrhus of the breast, that the cancer-tissue could not originate from the connective tissue. At the margins of mammary scirrhus were outlying groups of cells like new-formed gland-cells.—Mr. BUTLIN would agree so far with Dr. Thin, that in epitheliomata and papillomata he had occasionally seen cells which had arisen in the connective tissue immediately subjacent to the mucous layer of the epidermis. It would simplify matters much if all these new cells could be traced to white blood-corpuscles; but there were difficulties in the way of accepting this doctrine, especially as regarded the formation of epithelioma. In a papilloma springing from the interior of a sebaceous cyst he had found numbers of cells containing two nuclei. In some of the cells the nuclei were closely approximated, in others widely separated by a considerable quantity of protoplasm. Each nucleus was of large size, and contained a well-developed nucleolus. Such a condition as that was surely suggestive of the division of cells, a process which it was impossible to see. It was far easier to affirm that an epithelial cell does not divide than the contrary. The "cell nests" were just as numerous in such a papilloma as in epithelioma. In fact, he had seldom seen them in greater abundance than in this specimen, and if Dr. Thin's view as to the formation of these "nests" were correct, this structure should contain a much larger quantity of sebaceous and sweat glands than the normal tissue. The nests could only be formed from within outwards. If Dr. Thin's views be accepted then the researches of Creighton, Klein, Weldeyer, &c., must be overlooked. —Dr. THIN, in reply, said that there was a marked histological difference between a chancre and an epithelioma. He could

not expect his opinions to be at once accepted, but he urged on histologists the adoption of osmic acid as a hardening and staining reagent; it served to "fix" the cells in a manner which was not attained by the use of chromic acid and spirit. His preparations showed the gradual development step by step of epithelioma from white blood-corpuscles, and in support of this view he might quote Rindfleisch, who maintains the regeneration of epithelium from lymphoid cells. In all epithelial tissues some contained two nuclei, but this division was, he believed, due to degeneration. As regards ichthyosis and warts he believed that, from a change either in the tissue itself or in the general condition of the patient, the epithelioma grows down into the deeper tissues, which are absorbed, and that it then acts as an excitant of inflammation. There was out-wandering of white blood-corpuscles, which, coming in contact with the epithelium, underwent an epithelial transformation. The "authorities" on the subject do not agree, and he believed that the vacuolation, to which Dr. Creighton ascribes so much importance, was produced by simple processes of disintegration.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on Wednesday, March 8th—Dr. Priestley, President, in the chair—the following gentlemen were elected Fellows of the Society:—David Finlay, M.D., Litton Forbes, L.R.C.S. Ed., Geo. E. Herman, M.R.C.P., Henry J. Lanchester, M.D., Geo. H. Lilley, M.R.C.S. (Coventry), Henry A. Lovett, M.R.C.S. (Worcester), A. D. L. Napier, M.B. (Fraserburgh), and C. S. Redmond, L.K.Q.C.P.I.

A report by Drs. Galabin and Chalmers on the specimen of Extra-uterine Fœtation exhibited by Dr. Chalmers was read. The conclusion arrived at was that the bones were portions of a fœtus, the remainder of which had escaped either by the rectum or vagina, and that the ovum must have become fecundated in the ovary, and have been developed in the cellular tissue in its neighbourhood.

Dr. HAYES exhibited for Mr. B. White, of Twickenham, a Fœtus which had presented by the brow. Forceps were applied, but failed to effect delivery. The left frontal eminence was perforated and the head brought down, when a further obstruction was discovered by a large tumour near the shoulder, extending from the sternum nearly to the vertebral column. On opening it some sero-sanguinolent fluid escaped, and delivery ensued. It seemed to be a mucoid degeneration, probably a myxoma originally. The parts were being frozen for subsequent examination.—The PRESIDENT remarked that in internal aspect it resembled an enormous nævus he had once seen with Sir James Paget occupying the dorsal and cervical regions. It was not sufficiently large to obstruct delivery. The child was now living and the mass shrivelled.

Dr. AVELING exhibited an instrument he had designed for everting the anterior wall of the rectum by pressure on the posterior wall of the vagina when the resistance was unusually great, or when, to facilitate any operation, the protrusion had to be kept up for some time. It consisted of a bulb with a stem bent at right angles two inches from the bulb.

The PRESIDENT announced that Dr. Arthur Farre had sent a further instalment of casts illustrating the condition of the uterus after delivery at various periods. A brief description of the ten specimens exhibited was read. The first represented the interior of the uterus in a woman who died during labour, probably from hæmorrhage; the second and third the external and internal appearances of a uterus of a woman who died twenty-four hours after delivery at the eighth month. The remaining specimens illustrated the condition of the uterus at more advanced stages after labour, showing the placental site and various stages of involution. These constituted but a small portion of the collection which Dr. Farre had presented to the Society.—Dr. GRAILY HEWITT thought this the proper occasion for moving a formal resolution of thanks. It was a rare thing for such a gift to be presented to the Society, and he proposed a cordial vote of thanks to Dr. Farre for his valuable gift, which Dr. MURRAY seconded, and hoped the Society would soon have a room large enough to receive the collection. The resolution was carried by acclamation.

Mr. JONATHAN HUTCHINSON read a "Report on certain Causes of Death in Ewes during and after Parturition, with Notes on the 'Navel-ill' in Lambs." This was a long and interesting communication, in which the author recounted his experience during the last three seasons. The results seemed to prove that the death of the fœtus before delivery was of far more serious consequence in sheep than in the human subject, and also that it was far from an infrequent one, the lamb after death appearing to become a cause of metritis, and there being little tendency to its expulsion. When metritis occurred, it was apt to run a rapid course, gangrene often ensuing, during which rupture of the walls often took place. Peritonitis and pyæmia not infrequently occurred in connexion with metritis. Puerperal metritis and peritonitis, or the consequent pyæmia, seemed to be invariably accidental, so to speak, and not the result of contagion. They occurred in animals treated in the open air, and yet ran a course almost precisely similar to the parallel maladies in the human subject. Ewes, during lactation, seemed liable, by the use of an improper article of food—e.g., cotton-cake,—to a sort of idiopathic tetanus, which the same article of food showed no tendency to produce in lambs, hoggets, and undelivered ewes. Lastly, young lambs were liable, quite independently of any known source of contamination, to the occurrence of purulent phlebitis of the umbilical vein, with the consequent phenomena of pyæmia, a fact which gave strong support to what Mr. Hutchinson believed to be the true hypothesis of all pyæmia strictly so called.—Dr. COOPER ROSE referred to the salutary effects of opium in subduing pain and spasm in sheep. Many ewes died *after* lambing from what was called *straining*. This he believed to be analogous to after-pains, which, if neglected, led in the sheep to metritis, exhaustion, and death. In 1853 he advised a friend who had lost several sheep from this symptom to try two-drachm doses of laudanum in warm gruel every two hours. This had the effect of entirely curing the disease, all the sheep which were subsequently attacked, with one exception, being saved. In order to eliminate all sources of infection he would like to know whether the land had been manured by sewage or artificial manures.—Dr. PLAYFAIR said it would be difficult to over-estimate the value of such a paper. It would be well if others were to follow Mr. Hutchinson's example. His conclusion as to contagion having nothing to do with the disease seemed hardly justified *prima facie*, and it would be interesting to know if Mr. Hutchinson had really eliminated the possibility of the disease having been conveyed to the affected ewes. There were many points that forcibly reminded him of the epidemics of puerperal fever occasionally occurring in limited localities or in the practice of one man. In Mr. Hutchinson's series the first case of all was clearly a case of autogenetic septicæmia, a piece of placenta being found in utero after death. Was it not possible that the epidemic was started by this case, and conveyed to the other ewes by the shepherd, or in some other way?—Dr. SNOW BECK, in further illustration of the subject, had brought forward specimens of uteri removed from sheep which had died after lambing. These he had carefully examined under water. They were large, flabby, and uncontracted, but otherwise all the tissues were perfectly healthy. He had failed to detect any appearance of inflammation, nor were there any coagula in the veins. On laying open the uterus the inner surface was seen to be covered by a copious dirty reddish-yellow purulent-looking fluid, which when washed away left the surface flocculent and shaggy, as is usual. Some of the veins were found to be filled with a fluid similar to that seen on the internal surface of the uterus, but the coats of the veins were healthy. On injecting air into these veins it traversed the sinuses in the walls of the organ, and escaped, by openings previously concealed, at the points where the cotyledons of the placenta had been situated, leading to the conclusion that the fluid from the interior of the uterus had been taken up by these veins, owing to the flabby, uncontracting condition of the uterine walls, and conveyed into the general circulation, in the same manner as in the human female after a miscarriage or parturition. The further changes generally found in the human subject were not observed in the ewe owing to the animal being killed at an early stage of the affection.—Dr. WILTSHIRE thought that there might

perhaps be something poisonous in the pastures in which the ewes were grazing, and was struck with the suggestion that Mr. Hutchinson attributed the mortality among his lambing ewes to the use of cotton-cake. In America, and especially among negresses, cotton-root is used as an abortefacient. The symptoms were markedly tetanic. Was there any elevation of temperature? Was the saliva of the mother poisonous through nibbling the umbilicus of the lamb in the disease called "navel-ill," as it is in hydrophobia?—Dr. AVELING thought Mr. Hutchinson's paper very valuable. He would remind the fellows that Harvey, the father of British obstetrics, gained a great deal of his obstetric knowledge from the numerous and accurate observations he made upon generation and parturition in the deer. He thought our knowledge might be extended by studying the parturient processes, puerperal disorders, and diseases of the female generative organs in animals.—Dr. GRAILY HEWITT said that when attached to the British Lying-in Hospital he had noticed a condition analogous to that spoken of by Mr. Hutchinson as navel-ill. He remembered reading a tract published some years since in which the connexion between morbid processes at the navel and icterus of newborn children with distinct affection of the liver had been noted.—Mr. HUTCHINSON inquired whether the patients generally recovered when jaundice was marked, or whether they ended fatally with symptoms of pyæmia.—The PRESIDENT inquired whether the young lambs suffering from navel-ill belonged to the ewes affected with tetanus, and whether the lambs themselves showed any symptoms of tetanus. Dr. Osborne and Dr. Bland had contributed valuable information to the subject of the diseases and complaints of the lower animals from parturition.—Dr. EDIS thought that in the first year's experience recorded by Mr. Hutchinson, the suggestion offered that the high ratio of difficult labours may have been incidental to the breed; the attempt to obtain large animals by crossing the breed was in all probability the true explanation of the mortality. This was a well-recognised fact among sheep-farmers, who were always careful to avoid placing rams of a larger breed with ewes than experience warranted, for this very reason. As to "the death of the fœtus before delivery being a far more serious occurrence in sheep than in the human subject," this might be explained by the greater apathy among shepherds, owing to their attention being divided among so many, than is the case with medical men who, in addition to special knowledge, individualise their cases, and where death of the fœtus occurs before labour, induce delivery at once before any ill-results from decomposition and putrid infection have had time to take place; but where this has been neglected, septicæmia is by no means infrequent. A case occurring in a dog, illustrating these views, was given.—Dr. BRAXTON HICKS stated that in an epidemic of puerperal fever in Paris the children were affected by peritonitis. It would be interesting to know how far this was in connexion with pyæmic origin. There was unquestionably some relation between septicæmia and this condition.—Mr. HUTCHINSON, in reply, asked whether, in the epidemics mentioned by Dr. Hicks, any distinct deposits were found in the liver from inflammation of the navel. He was surprised to hear children suffered so. In all his lambs which died of the "navel-ill" pyæmic deposits were invariably found in the liver. The lambs affected were not solely from sheep suffering from tetanus. There was no association between the two, as far as he had observed. The tetanus in the ewes was due to the food taken. In one lamb the navel was long, and had not been nibbled by the ewe. Many of the lambs had not been touched by the shepherd. Dr. Playfair had suggested that the cases were possibly those of peritonitis, pyæmia, and metritis, analogous to puerperal fever in the human subject; that the first case was autogenetic, and the others from contagion. The details given showed that any supposition of that sort was out of the question, the dates showing that the cases occurred at considerable intervals from each other. In several it seemed due to the retention of a dead lamb before delivery. It was puzzling to explain how one year there were many deaths and another none. He had no reason to believe the inflammations of the uterus had any relation with each other. They seemed to arise of themselves and from independent sources. As regards tetanus he had not seen any case among the lambs, and as to the influence of food he thought this had little to do with it, as last winter the ewes were fed on cotton-cake, but there were no cases of inflammation. The disproportion in the size of the lambs to the maternal passages he considered a very important point.—Dr. COOPER ROSE wished to ask one question—namely, whether the land was manured by artificial manure? to which Mr. HUTCHINSON replied that the ewes were fed on turnips, and not on grass.—Dr. WILTSHIRE inquired whether there were any yew trees about? to which Mr. HUTCHINSON replied in the negative.

Reviews and Notices of Books.

A Treatise on Surgery, its Principles and Practice. By T. HOLMES, M.A.Cantab., Surgeon to St. George's Hospital. With 411 Illustrations, chiefly by Dr. Westmacott. Pp. 928. London: Smith, Elder, and Co. 1875.

A WELL-WRITTEN and carefully-prepared English compendium of the principles and practice of surgery has long been a desideratum. Until two years ago there was no work to bridge over the wide gulf betwixt the small but admirable Vade Mecum of Druitt and the portly but fertile volumes of Mr. Erichsen—the two works which have, in the country, deservedly gained the popularity of students and practitioners. The System of Surgery of which Mr. Timothy Holmes is the able editor, is, for reference and for study, somewhat impracticable and not always satisfactory. There was, therefore, a manifest want of a work in which the principles of surgery should be sufficiently intelligibly expounded to render the practical teachings instructive, safe, and profitable. Mr. Holmes was pre-eminently fitted for preparing such a work. As the editor of the System of Surgery and of Gray's Anatomy, and the author of a valuable work on the Surgical Diseases of Children, he had given proof of his extensive acquaintance with the literature of surgery, while as a surgeon to St. George's Hospital and as the professor of surgery to the Royal College of Surgeons of England, he had shown that he lacked neither originality nor skill. With such antecedents Mr. Holmes might well anticipate a large and eager circle of readers. This, we believe, he has already gained, and by that means placed himself, to some extent, beyond the reach of ordinary criticism. But as the work is specially intended for students, it may not be unprofitable to glance over its pages and consider its teachings.

As the work is a large one, we cannot undertake to notice all the subjects comprised therein, but shall confine ourselves to the task of examining, on the one hand, the manner in which some of the more important principles of surgery are enunciated, and, on the other hand, of considering some of the practical lessons which the author inculcates. By this means we may best ascertain how the principles and practice of surgery are dealt with.

The book is professedly founded on the System, but in the preface Mr. Holmes reminds his readers that he has throughout endeavoured to present "sufficient evidence of that personal experience of the various exigencies of surgery which can alone justify an author in attempting the difficult task of writing on the general subject of surgical theory and practice." It is, however, precisely in this respect that he seems to have failed. Chapter after chapter is an abridgment of the corresponding essays in the System, with here and there extracts and observations from more recent literature.

The first chapter comprises the important subject of Inflammation and the process of union in soft parts, including therein a description of traumatic fever and the dressing of wounds. Although this chapter is evidently founded on the able and learned article by Mr. Simon, and the recondite essay of Dr. Burdon-Sanderson on the process of in-

flammation, it is extremely disappointing. Either Mr. Holmes entertains opinions diametrically opposed to the two gentlemen just named, or he has misunderstood their writings. "Inflammation," says the author in the opening sentence, "is the name given to a perverted vital action, one of the chief features of which, as the name implies, is the production of unnatural heat in the part," and yet in subsequent portions of the work he speaks of the repair of wounds and of fractures as the result of inflammation—that is, of "perverted vital action." Such an opinion is, to say the least, at variance with modern pathological doctrines. The best recent authorities have never wearied in insisting that reparative action is only perfect when inflammation is entirely absent, and, conversely, that the higher the degree of inflammation the more unstable and imperfect are the products of repair. To include, therefore, a description of the mode of union of wounds under the heading of inflammation seems to be a decidedly retrograde step, and calculated to mislead. We must, however, pass over the other faults of this chapter, and they are numerous, with mere mention. The determination of blood in the early stages of the inflammatory process is termed congestion, while inflammatory stasis is designated *passive* congestion; swelling is alleged to be due to extravasation, but no mention is made of the turgescence and proliferation of the germinal elements of the tissues; the causes of inflammation are not even referred to, nor is there an intelligible description of the principles which should guide us in the general treatment of inflammation.

The description of Pyæmia and Septicæmia is not without merit, but is by no means comprehensive. Although Billroth and Heiberg are laid under contribution, no reference is made to the still more important investigations of Virchow and Burdon-Sanderson. It is implied that the jaundiced appearance of pyæmic patients is usually due to some affection of the liver, whereas Frerichs has alleged that the bilious appearance is generally quite independent of any corresponding changes in the liver. The treatment of pyæmia is dismissed in a brief, off-hand manner.

It is with pleasure that we note the good and complete account of Hydrophobia; but, turning to the general chapter on Fracture, we notice a repetition of some faults already referred to. The union of simple fracture is described in the most general terms, no mention being made of the minute changes which take place in the Haversian canals and in the bone cells, and no clear distinction drawn between the different kinds of callus. The general treatment of compound fracture is got rid of in nine lines. Whilst on the subject of fractures it may be incidentally observed that Mr. Holmes, in discussing the treatment of fracture of the upper third of the femur, states that "it may be justifiable in extreme cases even to apply the pulleys" to reduce the displacement of the lower fragments. The description of the special fractures is very uneven; in some parts it is admirable, in other parts extremely defective.

The chapter on Injuries of the Head is mainly based on Mr. Prescott Hewett's article in the System of Surgery, and is, for the most part, well done. On the important question of excision of joints, as opposed to amputation, Mr. Holmes is practically silent.

Passing now to a subject never without interest to surgeons, but at the present time unusually important, we find that two chapters are devoted to a description of the Diseases of the Urinary Organs. Here, again, we have to confess to disappointment. This part of the book bears unmistakable signs of having been hurriedly written, which is, perhaps, not altogether inexcusable when we consider that the chapters begin at page 731. The following is an instance of carelessness. Mr. Holmes speaks of "the inflamed and putrid urine" (*sic*) coming in contact with the cellular tissue. Similar lapses may be found in the consideration of the diagnosis of urinary diseases. He does not even mention the frequency of micturition as a sign of affections of the urinary organs; nor does he point out the great aid that the recognition of the various modes of manifestation of that symptom affords in distinguishing enlargement of the prostate, stricture of the urethra, and stone in the bladder.

As regards the diagnosis of stricture, he is singularly vague and indistinct. Having mentioned that for a time the patient has to strain in micturition, he goes on minutely to describe the complications of stricture, such as retention, extravasation, and fistulæ, but not one word is said about exploring the urethra with bougies in order to ascertain the presence of stricture. In fact, we have been unable to find a definition of urethral stricture. Mr. Holmes advises that if there be retention of urine instruments need not be at once employed, but that the patient be put upon a preparatory course of treatment. It would, however, be interesting to know how Mr. Holmes ascertains that he has a case of urethral stricture to deal with until he has ascertained its presence or absence by means of an exploring bougie. With regard to the treatment of stricture, Mr. Holmes's account is a fair epitome of the present state of our knowledge, but he presupposes too much previous knowledge on the part of his readers. For example, he carefully describes how the bulb of Civiale's urethrotome is passed through the stricture before the stricture can be cut from behind forwards, but says nothing of any preliminary preparation of the urethra being necessary for the reception of the urethrotome. Mr. Holmes evidently prefers the old metal instruments, for he urges the student to practise passing the catheter on the dead body until he can do it easily with one hand.

Gladly would we praise the chapter on Calculus if we could, but to us it seems far from up to the present state of knowledge. There is nothing of more importance in connexion with the subject of calculus than to know well, as far as it is possible, which cases should be cut and which crushed. A recognition of the size of the stone is, however, not even referred to as being of any use in the solution of this problem. The diagrams are singularly old-fashioned, and no one acquainted with the beautiful instrument known as Thompson and Weiss's would recognise it in Fig. 370. Mr. Clover's well-known injecting apparatus is, strange to say, directed to be held vertically, a position in which the instrument would, without doubt, not be in the bladder at all. We note with pleasure that, in sounding for stone, Mr. Holmes recommends the short-beaked sound. But with such an instrument in his hand, we are astonished to find the student diligently warned not to mistake the sacro-vertebral angle or the ischial spine for calculus. This occurs in a paragraph not specially devoted to sounding for stone in children, but in which the subject is generally discussed.

If we appear to have been unduly exacting in our notice of this work, it is because the high reputation and the previous productions of the author had led us to anticipate a high degree of excellence. We came to the work strongly prejudiced in its favour, and we leave it with a corresponding degree of disappointment. Even on those subjects, such as aneurism and diseases of bone, in which he has an acknowledged reputation, Mr. Holmes has not done himself justice; and we fear that he has not quite caught the style necessary for successfully writing a work for students. An attempt has been made to give completeness by adding a long chapter on diseases of the eye and a shorter account of the more important diseases of

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the ear. As to the propriety of this, two opinions may be held. For ourselves we doubt the utility of attempting to give a "bird's-eye view" of diseases of the eye in a treatise on general surgery. The subject should either be dealt with in its entirety or omitted altogether. The chapter on diseases of the eye has been prepared by Mr. Carter, who seems to share our opinion, for, in some instances, diseases, instead of being described, are merely defined. We may, however, confidently hope that in another edition Mr. Holmes will effect the necessary improvements. The book is exceedingly well got up, and forms a good basis on which a popular text-book may be built. Many, but by no means all, of the engravings are of a high order of merit, and the marginal notes are of extreme value to the reader.

REPORT
OF
The Lancet Sanitary Commission
ON THE
CONDITION OF COMMON LODGING-HOUSES.

No. I.

AMONG the numerous sanitary reforms attempted during recent years, perhaps no enactment has given more satisfaction to all parties concerned than the Common Lodging-houses Act. Passed in 1851, and amended in 1853, this Act brought about a complete revolution in the condition of the extreme poor; and although, as a rule, but little gratitude is either felt or expressed by persons in whose favour special laws are enacted, the present case is a decided exception; and there is no beggar or tramp so lost to all sense of decency and comfort as to deny the great benefits he has derived from the Common Lodging-houses Act. Except as regards the metropolis, this Act is now merged in the Public Health Act, 1875. Thoroughly impressed with the necessity of such a measure, and being well acquainted with its utility, not merely in the prevention of disease and contagion but as a check to the spread of vice and immorality, we have watched its application with the jealous interest which should be bestowed on all good laws. Under these circumstances, the rumours and reports which occasionally reached us, to the effect that the law was not enforced as vigorously as formerly, naturally awakened our attention and suggested the present inquiry. The mere fact that the metropolitan police alone have no less than 1254 common lodging-houses under their supervision demonstrates the importance of the subject. Nor does this include the whole police district, for it has been reduced by the Public Health Act of 1872 to the area subject to the main-drainage rate, levied by the Metropolitan Board of Works. The common lodging-houses beyond this district are under the care of the local boards of works or vestries; but, though the question is of importance, even to the smallest market towns of the country visited by tramps or "travellers," it is a matter of greater concern to the metropolis where a population of no less than 27,000 persons hardly ever aim at any higher degree of comfort than that to be obtained in the crowded dormitories of these peculiar establishments. As these people are the lowest, the most thriftless, degraded and careless among the poor and criminal classes of this country, the necessity of supervising houses where, at times, more than three hundred unfortunate men and women of this description congregate together is self-evident. A practical illustration will, however, better demonstrate the effect of the Act relating to these houses than a simple summary of its various clauses.

In 1850 there was a lodging-house kept at 1, Tindal's-buildings, Gray's-inn-lane, where about sixty men and women lodged. Several couples slept in one room, with only a slight curtain to separate them, in which time and wear wrought many a rent. The sheets on the beds, if such dirty rags might be dignified by that name, were changed, as one of the keepers of this house suggestively put it, "to suit convenience." This simply meant that if any occupant was so far moved as to desire to wash them, no further impediment would be opposed to the execution of this worthy resolution than the difficulty of obtaining soap, water, and a place to dry the sheet. A single tub was kept in a miserable back cellar, whence questionable water dripped and oozed over the floor and saturated the walls with humidity. Just above the water-supply, and opening on to the stairs, was situated the single closet available for the use of the sixty lodgers! It communicated with a cesspool, had no trap, and the odour emanating therefrom pervaded the whole house. One lodger obtained his bed gratuitously under the supposition that he kept this pestilential place clean; but with such limited accommodation no amount of cleaning could ensure cleanliness. The common room, or kitchen, was side by side with the cellar containing the tub; in fact, it was a large cellar, dark, damp, and so low that no one could stand upright in it. Six sleeping rooms completed the house, and despite dirt, foul air, and many other drawbacks, it was crowded; for the neighbourhood possessed only a few similar houses. Close at hand, in Fox-court, stood the celebrated "thieves' kitchen," which has now been happily converted into a workshop. The renown of this place brought many persons to Gray's-inn-lane. It possessed a subterranean passage, where thieves concealed themselves and hoarded their stolen goods; but under the new Act the police refused to register this house, and finally discovered they had seized a modern Ali Baba, and even more than forty thieves. It required several waggons to carry away the treasures thus disclosed.

At Tindal's-buildings some efforts were made to meet the regulations of the Act. The partitions between the two cellars were thrown down, and they were dug three feet deeper to give a height of eight feet from floor to ceiling. Chimneys were built, water-supply laid on, proper tables and forms introduced, and jack-towels provided. This house, which had on rainy nights harboured more than 70 lodgers, when beds were made up on the floor between the sixty bedsteads and even on the staircase, was registered under the new law as capable of containing only *forty-two* lodgers. The old bedsteads had to be in part destroyed, flock bedding that had not seen daylight for many a year was emptied away, all the walls were whitewashed, and married couples were separated by wooden partitions six feet high. The old closet was pulled down, two new closets built instead, trapped and panned, and placed in communication with the sewer. Such was the change wrought in a single house by the Act; and, with some slight variations, improvements equally thorough and beneficent were accomplished in thousands of other common lodging-houses. Indeed, the police seem to have acted with great sense and energy, much to the amazement of the persons concerned. The houses were visited at all hours of the day and night, and the slightest infringement of the rules laid down by the police in accordance with the Act was followed by immediate prosecution. Now, however, the lodging-house keepers have become so well acquainted with the Act that this severity has been somewhat relaxed. Thus, to return to the specimen case we have selected, the keeper of the house in Tindal's-buildings found it more prudent to convert one of his rooms into a lumber room, so as to reduce the number of his lodgers. His house had been registered as capable of holding forty-two inmates, but there was a police regulation to the effect that not less than one closet should be provided for every twenty persons; and, as he possessed space only for two closets, he found it safer to sacrifice his lodgers than to be suspected of occasionally exceeding the limit imposed on him. The irruption of the police into these houses during the night brought about many summonses for dirty stairs and boards, to which the keepers replied by attributing the dirt to the muddy shoes of the lodgers, who sought their beds at all times of the night, asserting that it would have been cleared away in the morning, and had the police called in the day-time they would have found the boards clean enough. The police also used to turn down the bed-clothes and disturb sleepers, so

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as to assure themselves that men were not sleeping together. These reiterated night visits caused great alarm, and as many lodgers in these houses have crimes on their conscience, the constant apparitions of police were particularly objectionable. Thus the keepers endeavoured to render the interruptions less necessary by strict attention to all the regulations; for a house frequently visited by the police soon got a bad name among the bad characters who lodge in these resorts, and therefore lost its custom. Under these circumstances, and after several prosecutions, the house in Tindal's-buildings was avoided by its former lodgers. It had finally to be closed, and in the same manner many other and even worse resorts were swept away to make room for what may be considered, comparatively speaking, as model lodging-houses. Now, however, the lodgers have learnt to recognise between the police sanitary inspectors and the ordinary criminal detectives; and, while they rather like the former, they are ever ready to injure the latter.

Time, however, seems to have somewhat blunted the edge of the law. Night visits, once so often renewed, are now never attempted unless special circumstances warrant interference. The rule that there should be one closet for every twenty persons is no longer strictly enforced, and we could point out several houses where it is now violated. According to the Act 14 & 15 Vict., cap. 26, the local authority may, from time to time, make regulations respecting common lodging-houses within its jurisdiction. These regulations enter into the details by which the general principles of the Act are to be carried out, and vary according to the ideas prevalent in each locality. Thus, in many provincial places men are allowed to sleep together, while this is strictly prohibited in the metropolis. But recently a letter addressed by a professional beggar and tramp to a friend in London came into our possession, and it happened to contain some allusion to the provincial common lodging-houses he had frequented. We quote literally the following characteristic passage alluding to a lodging-house in Oldham:—"I was sitting aside a man who seem'd the most decent, and asked him how the beds were; he said he was going away as he had been eaten alive with vermin. He then showed me his arm, and then I found he had the itch. As soon as I discovered this I went out to inquire when the train started for Manchester, I was told about two o'clock, and Oldham being only six miles off, I thought I would walk it, which I did. I went to Angel-street, and took my bed in a place where I was once before. It is now a fearful den for dirt. I found my bedmate had a scrofulous disease, but being drunk when I went to bed I did not know, but when I awoke I felt quite ill with the thought. I then made my mind up to move." This passage, taken from a private letter, is perhaps more eloquent than any descriptive writing. It lifts a corner of the curtain, and discloses a picture of these common lodging-houses as they are now, even after years of reforming legislation. The person whose complaint we have quoted is no fastidious customer of the lodging-houses, but a common street beggar who has been accustomed to live in them nearly all his life.

The law asserts that "the keeper of a common lodging-house shall thoroughly cleanse all the rooms, passages, stairs, floors, windows, doors, walls, ceilings, privies, cesspools, and drains thereof to the satisfaction of, and so often as shall be required by or in accordance with any regulation or bye-law of the local authority, and shall well and sufficiently, and to the like satisfaction, limewash, &c., walls and ceilings thereof in the first week of the months of April and October in each year;" but no law of cleanliness is enforced on the lodgers themselves. They may go from house to house covered with vermin, devoured by the itch, or suffering from syphilis and skin disease, they may solemnly and for ever abjure the use of soap, and shrink from the purifying touch of water with all the timidity of a kitten; there is no power to force them to obey in their own persons the most elementary laws of decency. Opposite the reputed thieves' resort known as the Blue House, in Kent-street, Borough, stands a little lodging-house of lesser importance frequented more especially by pedlars. A member of our Commission, dressed in suitable disguise, penetrated into this ramshackle abode. The common room, as is usual in these houses, was on the ground-floor, with long table, benches, and a lurid coke fire, before which a herring hung hissing and spluttering and perfuming the whole apartment. The owner of this savoury morsel was perfectly black with dirt, and his companions were equally grimy in their general appearance. Probably not one in the assembly could boast of a change of linen; indeed, men of this class who can afford a shirt at all wear it consecutively day after day till it is reduced to shreds, when it is thrown away or sold as old rag, but never washed. It is not surprising that the keeper objects to putting a person coming out of such a shirt between clean sheets; or, on the other hand, that the lodgers themselves find no cause of complaint in the fact that the washing contrivances are placed under a miserable shed side by side with the closets in the back yard.

In the Mint, on the other side of the Borough-road, there are whole streets of common lodging-houses. These are frequented by some of the most desperate characters in London, and it is therefore a matter of no small difficulty to keep order and enforce sanitary regulations among such a crew. On entering one of these houses, in Red Cross-street, our commissioner produced quite a panic. Mistaking him probably for a detective officer, one man, wearing obvious trace of the "Newgate frill," literally ducked under the table in his momentary alarm. Others shrank aside with lowering looks, and the slightest hesitation on the part of the interloper would probably have brought upon him a combined attack from some thirty or forty roughs. The keeper, or deputy, as the manager of these lodging-houses is generally called, ultimately made his appearance, and, being duly reconciled to the purpose of his visitor, access was obtained to the closets, situated in a small back yard, and precisely opposite a little shed, with three iron basins let into a little woodwork. Three closets, three iron hand-basins, and one jack-towel had to suffice for a household of about ninety persons! The water for the establishment was obtained in a peculiar manner. A pipe was fixed in the centre of the yard, and rose to a height of seven or eight feet. At this elevation it was curved like a hook, and could be made to reach over the tanks placed on the top of the closets. When these are filled the pipe is twisted round, and the water then falls into a large tub, whence is derived the water used for making tea, &c. The proximity of this open tub of drinking water to the effluvia and horrible stench emanating from the three closets requires no comment, and should be remedied at once. The common room is separated from this small and objectionable yard by a window, which the lodgers must be tempted to open in summer, and then there must often be a score or two of men huddled together—cooking, eating, smoking, washing, and lolling about, within three or four yards of these disgusting closets. The kitchen, or common room, is a low rambling place of irregular shape, and strewed with sand hardened into a lumpy conglomerate with dirt and grease. When we add to these considerations that we were given to understand that the lodgers enjoy only one clean sheet per fortnight, and have to find their rest on flock bedding, chiefly remarkable for its hard and unyielding lumps and the vermin it harbours, it seems evident that this lodging-house is scarcely in a satisfactory condition.

Close at hand, in Queen-street, there is a house which is registered to accommodate forty-five lodgers of both sexes. The owner has another house at the back of it, which is not considered to come under the Act, because each room is let separately. A comparison of these two lodging-houses shows very strongly the usefulness of the Act, for although the registered house is far from perfect in a sanitary point of view, the other is horrible. The closets in the private house are so disgusting that the inmates, though not very squeamish, will not use them if they can help it, but prefer to come down to the yard of the other house.

There are, of course, objections to the common lodging-houses, even when well-ordered. The sense of privacy which is so valuable an attribute of the "Englishman's castle" is of necessity absent when common rooms are used; but when we place against this the facilities for supervision which they present, we cannot hesitate, for the lowest class, to give them the preference. This preference has been strengthened by our subsequent inquiries—inquiries which have been greatly assisted by the police authorities, to whom, warned by our earlier experience, we applied. We hope, in a second report, to describe some houses of a stamp very different from those here noticed, and to find room for some suggestions of a practical character.

THE LANCET.

LONDON: SATURDAY, APRIL 1, 1876.

THE debate on Syphilis has evinced a most unexpected and unwonted vitality, surpassing in the number of its stages the disease itself. That the interest in it is not exhausted, and that Mr. HUTCHINSON'S reply is looked forward to with curiosity and expectation, must be attributed in part to the interest and importance of the subject, and in part to the ability displayed by the opener and the various speakers. Surgeons and physicians alike have here found common ground, although the logical result of the acceptance of Mr. HUTCHINSON'S views would be to transfer the disease almost entirely from the care of the surgeon to that of the physician.

Whatever opinions may exist as to the wisdom of prolonging the discussion, no one will question that it would have lost much of its value if the speeches of Sir WILLIAM GULL and Mr. SIMON had been omitted. Mr. SIMON'S speech in particular stands out as perhaps the most profound and thorough exposition of the pathology of the disease, and is of especial importance from the high rank of the speaker as a pathologist, and as being the most clear and lucid statement of the main arguments against Mr. HUTCHINSON'S views. Nor could the clever arguments of Mr. THOMAS SMITH, or the happy hits of Sir W. GULL, have well been spared, if the debate were to possess its usual representative character. Mr. HUTCHINSON, too, will have the satisfaction of knowing that he has been assailed on nearly all the points on which his views are open to criticism.

We may pass over without comment, as having but little bearing on the general questions at issue, the divergent views of the army surgeons on the distinctions of the hard and soft sore, only remarking that we regret that Mr. HUTCHINSON should, even casually, have introduced such a bone of contention as the question of duality.

On the main points in the pathology of the disease there was indeed a striking unanimity of opinion amongst the principal speakers at the last meeting, and it is not a little remarkable that the opposition to Mr. HUTCHINSON'S views should have increased in strength towards the conclusion of the debate. We shall not endeavour to recapitulate or criticise in detail the facts and arguments brought forward by various speakers, but rather to indicate some of the main grounds of divergence from Mr. HUTCHINSON'S views on the general pathology of the disease. As was wisely observed by Mr. SIMON, the lines laid down by Mr. HUTCHINSON were too rigid, and the questions raised by him too arbitrarily limited to permit of an absolute reply. The nature and course of a disease are not to be settled by its arbitrary classification as "a blood disease," "specific fever," or the like, nor are certain phenomena incidental to a part of its life history to be seized upon as its essentials, whilst other and equally important ones are considered accidental and unimportant. In endeavouring to class syphilis with the acute specific fevers, or blood diseases, and relegating to the position of sequelæ certain factors of the disease which could not be otherwise shaped to suit his theory, Mr. HUTCHINSON has laid himself open to criticism from various points of view, and the fallacies involved have been pointed out by a large number of the speakers. Few, indeed, have been those who have accepted in its entirety the view that the tertiary phenomena are sequelæ. As Sir W. GULL happily expressed it, in one of those *mots* at which he is so apt, syphilis is a "flesh and blood" disease—a disease of the solid tissues as well as of the blood; and, as Mr. SIMON remarked, is more or less of a blood disease at various periods in its history. Hence Dr. GREENFIELD was to some extent justified in his endeavour to demonstrate that the analogy with the specific fevers is an incomplete and partial one, due to the mode of introduction of the poison and its course in the system up to a certain period, after which its divergence is as striking as its previous resemblance. But his argument would have gained in force had he traced out more closely the exact points of divergence. As Mr. SIMON clearly showed, the poison must be considered to remain in the system so long as any of its specific effects are manifested; and, whilst its action no doubt becomes weakened, and the chances of contagion lessened and limited to special modes of propagation, it is impossible to say at what period it becomes wholly extinct or inert.

To the question of hereditary transmission great importance has justly been attached, and, as was argued by most of the speakers, so long as this can occur the disease must be considered active. It is noteworthy that the views of the later speakers as to the mode of transmission seem to differ widely from some which have previously been advocated. That the poison is actually transmitted from the parent to the child as an actual entity, and not as a mere potentiality or law of development, as Sir W. JENNER and Dr. BROADBENT seemed to hold, was the view maintained by Mr. THOMAS SMITH, Mr. SIMON, and Dr. GREENFIELD. If this be the case, it is in reality reduced to a case of contagion, and not strictly speaking of heredity. The important question was raised by Dr. GREENFIELD as to whether there may not be, over and above this contagion, a true heredity of a tendency to certain peculiar tissue degenerations or malformations in the offspring of syphilitic parents, apart from the direct action of the syphilitic virus. The question is certainly one worthy of investigation, and would, if supported by facts, do much to clear up some of the obscure points in the history of congenital syphilis. The fact of transmission to the fœtus at a late period of the disease was rightly insisted on as evidence of the presence of the virus in the system of the parent, and Mr. THOMAS SMITH'S able argument may, we think, be regarded as conclusive upon that point.

We must pass on to notice the subject of the relation of gummata to the poison, and their position as sequelæ. To some extent the arguments on this point, notably those of Mr. JOHN WOOD, were a recapitulation of those already advanced. Mr. SIMON'S suggestion that these growths may arise from the weakened action of a poison which in its more active condition would give rise to inflammation is one of

considerable value. As he observed, an *active* sequela is a thing unknown in pathology, and although, in its widest sense, this statement would not command general acceptance, if we add the word "specific," it may, we think, be received. But, as was shown, the fact of the occurrence of syphilitic new growths at an early period, and the uniformity of their mode of growth and development and decay, point to the probability that they are due to the continued action of the same cause.

We have, thus far, pointed out certain of the more important and obvious of the objections to which Mr. HUTCHINSON will be called upon to reply. But we should scarcely do justice to the subject did we not allude to some of the more trivial incidents which served to enliven the discussion. Notably one or two of the remarks of Sir W. GULL should not pass unnoticed. Not content with hitting off the definition of the disease in the happy phrase a "flesh and blood" disease, Sir W. GULL has given us a novel mode of diagnosis, which may be applied in obscure cases. He is able to recognise, by the odour of the sweat, the presence of tertiary syphilis, apart from any local development of the disease. Herein is a discovery which far exceeds in practical value most of the information imparted during the debate, and one which will doubtless be welcomed by those whose olfactory organs are sufficiently developed to enable them to avail themselves of it. Perhaps it would be hypercritical to suggest that Sir W. GULL's sense of smell is more reliable than his clinical thermometer, or that perchance he has discarded the latter in favour of the former; for he stated that syphilis is "a fever without pyrexia," a statement which, emanating from anyone not occupying his position in the profession, we should be inclined to receive with some doubt. So, too, with regard to his suggestion that, from the origin of syphilis in the generative fluids, it might *a priori* be expected to pervade every tissue of the body, and be conveyed to the offspring. Perhaps it did not strike the speaker that gonorrhœa should, on similar grounds, be an hereditary disease. But these and some of Dr. GIBBON'S statements serve to give variety to the monotony of the arguments, and must not be too severely criticised from a scientific point of view.

ONE of the most immediately useful of the scientific investigations which have been carried out under the direction and superintendence of the Medical Officer of the Privy Council is the inquiry by Dr. BAXTER into the value of certain disinfectants published in the recent number of the Privy Council Reports. Most of our knowledge of the action of disinfectants is very crude and inexact, and is derived either from experiments vitiated by some preconceived theory of the process of contagion, or from a mere empirical idea that such and such agents have arrested the spread of a communicable disorder. In the last edition of his great work "On Hygiene," the late Prof. PARKES laments the imperfect nature of our information regarding the effect of chemical agents on the contagia, and this inquiry is a most able contribution in that direction. It is, of course, a preliminary investigation only, but there is such great discrimination shown in the selection of the disinfecting agents and of the different contagious matters that some very definite conclusions may be already arrived at. The absence of any theory as to the action of the disinfectants on the contagia, and more especially the freedom of the experiments from any hypothesis as to the chemical or biological nature of the various contagious processes, render them of permanent practical value in directing our efforts against the spread of communicable diseases, in complete independence of those changes of view which increased knowledge of such processes may entail upon us. Dr. BAXTER follows SIMON and PARKES in separating disinfectants proper from the various anti-fermentative, anti-putrefactive, anti-catalytic, and deodorising agents with which they are usually confounded. The tacit assumption that catalysis, fermentation, putrefaction, and contagion, are fundamentally similar, may be true, but is not so sufficiently established that it can be regarded as proved, and it is this fallacy which has marred previous researches by leading most observers to infer the disinfecting value of a body from its antiseptic or anti-putrefactive properties instead of investigating it directly. MECKLENBURGH, DOUGALL, and HENRY have made such investigations on the vaccine virus, and DAVAINE on the charbon virus, but their observations are very limited and very incomplete. Dr. BAXTER defines a disinfectant as an agent capable of so modifying the contagium of a communicable disease during its transit from a sick to a healthy individual as to deprive it of its specific power of infecting the latter. By narrowing his inquiry to a few of the substances which are generally believed to possess such powers, and by testing this action by the direct introduction of the *materies morbi*, with and without the disinfectant, into a suitable host or organism, Dr. BAXTER has been enabled to arrive at definite quantitative results as to their efficacy against the different poisons, and thus to supply us with most important experimental data on which to found our disinfectant operations. The contagia chosen for disinfection were the vaccine virus, the virus of infective inflammation in guinea-pigs, and the virus of glanders, and they were (in turn) submitted to varying percentage amounts of chlorine, carbolic acid, sulphur dioxide, and potassium permanganate. The method of conducting the experiments with liquid vaccine was the following, and the other contagia were introduced into animals (by inoculation) in an essentially similar manner. "Four capillary tubes having been charged from one vaccinifer, the contents of two of these were diluted with an equal volume of half per cent. saline solution (·5 gramme of NaCl in 100 c.c. of distilled water); the lymph contained in the other two was mixed with an equal volume of disinfectant solution of known strength. The diluted and the disinfected liquids were sealed up in separate tubes, and employed for vaccinating a healthy infant; the former being inoculated in three places on the left arm, while the latter was introduced into an equal number of places on the right arm, two lancets being employed for the purpose. The results were observed and recorded on the eighth day." Thus, every care was taken to ensure uniform potency of the lymph, and its equal dilution in the disinfected and non-disinfected tubes, and to eliminate any possible individual idiosyncrasy. Sulphur dioxide could not be used with liquid vaccine, as it caused the lymph to gelatinise. Chlorine was found more efficacious

in destroying its infective power than potassium permanganate, and the latter than carbolic acid, for ·16 per cent. of the first, ·5 per cent. of the second, and 2 per cent. of the last-named were required to render it inefficient. With regard to *dry* vaccine, it was found that exposure to sulphur dioxide deprived it of its virulence with much more rapidity and certainty than either chlorine or carbolic acid vapour. Neither of the last two substances exercised a sufficiently deleterious influence to lead us to imagine that they can destroy the small-pox virus, if only applied in the casual manner which is usual in the sick room. Dried lymph was next exposed to heat for thirty minutes at different temperatures, and above 80° C. (176° F.) it was rendered barren. Dr. HENRY found that a longer exposure to a less heat had the same effect, so that degree of heat and length of exposure are mutually compensatory. Solutions of the virus obtained from the peritoneal cavity of guinea-pigs which had succumbed to infective peritonitis were rendered innocuous by ·05 per cent. of permanganate and ·078 per cent. of chlorine, whilst it required more than 1 per cent. of carbolic acid, and nearly 3 per cent. of sulphurous acid to disinfect them. The same proportion of permanganate and ·16 per cent. of chlorine were as efficient in preventing the inoculation of donkeys with a solution of the nodules of glanders as 2 per cent. of carbolic acid, but sulphurous acid was much more effective in these experiments, for ·4 per cent. destroyed the contagium. Dr. BAXTER next entered upon a series of researches in order to discover if there was any relation between the antiseptic and strictly disinfectant properties of these substances, and came to the conclusion that the observed differences, which were very striking in the case of chlorine and potassium permanganate, depended on the medium in which the contagious particles were suspended. This view was verified by some further experiments on septic microzymes in aqueous and albuminous media, and these researches of course lend great support to the biological conception of the contagious processes. Dr. BAXTER's inferences from these most careful and excellent observations are of such extreme importance, and their practical value so manifest, that we must quote the concluding ones.

"Aerial disinfection, as commonly practised in the sick-room, is either useless or positively objectionable, owing to the false sense of security it is calculated to produce. To make the air of a room smell strongly of carbolic acid by scattering carbolic powder about the floor, or of chlorine, by placing a tray of chloride of lime in a corner, is, so far as the destruction of specific contagia is concerned, an utterly futile proceeding.

"When aerial disinfection is resorted to, the probability that the virulent particles are shielded by an envelope of dried albuminous matter should always be held before the mind. Chlorine and sulphur dioxide are both of them suitable agents for the purpose; the latter seems decidedly to be the more effectual of the two. The use of carbolic vapour should be abandoned, owing to the relative feebleness and uncertainty of its action. Whether chlorine or sulphur dioxide be chosen, it is desirable that the space to be disinfected should be kept saturated with the gas for a certain time, not less than an hour; and this in the absence of such gaseous compounds as might combine with or decompose the disinfectant, and so far impair its energy.

"When the thorough disinfection of a mass of solid or liquid matter, through which a contagium is disseminated, is impracticable, we should guard against giving a false security by the inadequate employment of artificial means. It is probable that all contagia disappear sooner or later under the influence of air and moisture, and that the absence of these influences may act as a preservative. When, therefore, we cannot advantageously or effectually supersede the natural process of decay, we must be sure that we do not hamper it by the injudicious use of antiseptics.

"Dry heat, when it can be applied, is probably the most efficient of all disinfectants. But we must be sure that the desired temperature is actually reached by every particle of matter included in the heated space."

IN a recent memoir, published in the *Gazette Médicale*, M. BOCHEFONTAINE gives the results of a series of experiments he has performed with the faradaic current applied to the cortical substance of the brain. He considers that the results he has obtained are opposed to the idea of localised centres, since the same effect—as, for example, increase of blood-pressure—occurs when the current is applied to several different points of the cerebral cortex. This is sufficiently evidenced by the free bleeding, and even jets of blood, that occur from the smaller vessels. M. BOCHEFONTAINE finds that the effects of the application of a faradaic current to the brain are both direct and crossed. He believes he has ascertained the existence of three points at least of the cortex electrisation of which manifests a distinct action on the circulation. The frequency of the pulse is sometimes augmented, sometimes diminished; and, as a rule, there is augmentation of the arterial tension, though sometimes the reverse is observed. Now, in all these experiments the vago-sympathetic nerve (for these nerves are united in the dog) was either intact or was divided in the middle of the neck, and M. BOCHEFONTAINE suggests, in order to explain the differences of arterial tension observed in different instances, that the electric stimulus applied to the cerebral cortex may sometimes have excited the peripheric cerebral ends of nerve-fibres connected with the nuclei of origin of the pneumogastric, and sometimes those of fibres connected with the superior cervical ganglion or with the centres of origin of the sympathetic in the cord. To settle this question M. BOCHEFONTAINE repeated his experiments, after excising the superior cervical ganglion, the vagus being uninjured, and after section of the vagus between the points where it receives filaments of communication from the superior cervical ganglion of the sympathetic, and where it emerges from the base of the brain. The results he obtained are exceedingly interesting. They show, first, that when the vagi were preserved intact whilst the superior cervical ganglia were excised, faradisation of the external superior frontal convolution, both in front of and behind the cruciform furrow, and in two other regions, causes augmentation of the blood-pressure with increased frequency of pulse, these effects being both direct and crossed. Secondly, when the vagi were divided between the above-mentioned points, whilst the superior cervical ganglion of the sympathetic was preserved, electric irritation of the superior external frontal convolution at the same points caused considerable diminution of the intra-carotidean tension, and

some retardation of the pulse. These facts show very clearly that amongst the fibres of the corona radiata there are some which, when irritated at the surface of the brain, cause depression of the heart's action through the intermediation of the grey substance of the medulla. An effect is thus obtained which is analogous to that produced by faradisation of the nerve of Cyon in the rabbit.

Other observations have been made by M. BOCHEFONTAINE which we may briefly mention, since they possess a certain interest in pathology. He has discovered at least three points of the cerebral cortex faradisation of which produces hypersecretion of the submaxillary glands. He has also noticed that stimulation of the dura mater produces the same effect. He finds, moreover, that in one cerebral lobe there are *four* points which when excited produce energetic contraction of the spleen, and *six* which, when excited, cause contraction of the intestines. In one of these experiments the bladder also discharged its contents as soon as the current was applied. In attempting to give an explanation of these curious facts, M. BOCHEFONTAINE maintains that they are essentially of a reflex nature, and that just as faradisation of the centric extremity of a divided sciatic nerve increases arterial tension and causes movements of the limbs by reflection from the cord and medulla oblongata, so on irritation of the cortex of the brain, fibres are stimulated which react on the heart and other organs through the same centres. However we may explain the phenomena observed, it must be admitted that they present considerable physiological interest.

Annotations.

"Ne quid nimis."

THE DENTAL PROFESSION.

THE formation of an association of surgeons practising dental surgery is now a *fait accompli*. Its object briefly is to raise the standard of education in that branch of practice, and to maintain the connexion which ought to exist between it and general surgery. It is not many years since the specialty was almost entirely in the hands of empirics, few qualified practitioners at the time devoting themselves to its study, and those few surrounded by charlatanry of every description, whose existence made them sensitive as to the very name of their calling. Since then dental surgery has made great strides. The better class of dentists, qualified and unqualified, banded themselves together, and eventually secured the institution of a special diploma by the Royal College of Surgeons, which has worked great good, although it was then felt that it should rightly be appended only to the diploma of membership. The acquisition of the latter, however, would have been impossible to the many unqualified men who were then in the profession, but who had nevertheless conducted their practice on the most honourable principles. After much discussion, a licentiateship in dental surgery was granted by the College in 1860. This diploma was given to all those gentlemen whose professional conduct was satisfactory, who were in practice at the time, and who desired to receive it, during a period of three years, after which a curriculum and a stricter examination were imposed, though up to the present time the College authorities have been so liberal that all those who practised dental surgery prior to 1859 are still admitted to examination without undergoing the prescribed course of study.

As we have said, the institution of this certificate has been productive of much good, and the recent determination of the Council of the College to exact from candidates for the L.D.S. the same test of preliminary education as that to which medical students are subjected will greatly increase its value. Although the practice of dental surgery may not be so closely connected with medicine as other specialties, it is nevertheless inseparable from it. The aurist and the oculist are qualified surgeons, and the dentist, in placing himself upon the same educational footing as other specialists, has indubitably a claim to equal rights. The teeth, like the eye and ear, are in intimate relation to the general system, and are equally liable to be affected sympathetically; while dental disease is to a great extent dependent upon or aggravated by morbid conditions of the body. It is for these reasons that we contend that dentists should be fully qualified. The resolve of the new Association to admit none but those whose names are entitled to be placed on the Medical Register is a wise one. The mere fact of the existence of such a Society will act as an incentive to others to aspire to a complete qualification. The right to form a new Society cannot be questioned, and that there was a necessity for one is shown by the discussion which is now taking place. It does not appear to us that any hostility has been displayed towards the Odontological Society, as alleged by some. It will continue to perform its work. It may, however, be well imagined that the discussion of questions of ethics in the Odontological Society would lead to much difference of opinion amongst members whose admission has been the result of their abstention from advertising for a short period. A truly representative body should not descend to the level of those it would improve, but should rather attempt to raise them to its own standard. In our opinion there is ample room for the existence of the two Societies. The creation of the new one has already aroused healthy action in the dental profession, and will, we trust, eventually effect many useful reforms.

DEATH CERTIFICATES AND UNQUALIFIED PRACTITIONERS.

THE Registrar-General has just issued to his 2194 local registrars in England and Wales a memorandum which is apparently intended to remove what always appeared to us a just ground of complaint—namely, that registrars accepted certificates of the cause of death issued by unqualified and unregistered medical practitioners. The initiated in registration law and practice may have been well aware that the information contained in a so-called certificate of an unqualified practitioner was not entered in the death-register as a certified cause of death, but only as the statement of the ordinary informant of the other particulars required to be entered in the register. To the uninitiated, however, the retention by the registrar of the statement of the unqualified practitioner appeared like an official recognition of the statement as a certificate. The Registrar-General's recent memorandum instructs that "whenever the written statement of an *unregistered* or *unqualified* medical attendant is produced as part of the information tendered by the informant of a death, the registrar will not retain such written statement in his possession; it will be his duty, after making the entry, to return the paper to the informant." The memorandum, moreover, urges registrars "to use all possible diligence to obtain, whenever practicable, the certificates of registered medical practitioners, which certificates are to be carefully preserved as official documents." While accepting this memorandum in the

spirit which obviously prompted it, we cannot feel sanguine as to the influence it may exercise upon the proportion of deaths the causes of which are uncertified by registered practitioners or coroners. If registrars, in returning to the informants these written statements of unqualified practitioners, explain the cause of their being so returned, useful knowledge on the subject may thus be conveyed to some persons who know no difference between qualified and unqualified practitioners. This, however, will leave untouched a large proportion of the evil. It is only to a change of the law that we can look for any important reduction in the proportion of uncertified causes of death; and that some change which would have this effect is urgently called for, the condition of the death-register in the Black Country, to which we recently called attention, abundantly testifies. In the meantime we may hope for some good result from the Registrar-General's memorandum, and trust for the rest to follow from an increased public appreciation of the value, from a medical, sanitary, and statistical point of view, of the nearest possible approach to scientific accuracy in our knowledge of the causes of death. Medical officers of health may do much in this direction by watching and recording in their periodical reports the proportion of certified and uncertified causes of death in their several districts.

FOOTBALL.

ON the 18th ult. we published a letter from "Head-Master" asking us to discuss the advantages and disadvantages of football on "broad grounds, and not the narrow issue of an exceedingly small percentage of accidents." We would point out, however, that it has always been our endeavour to do so. Our objections have never been raised against football as a game, but against the manner in which it is at present played. The fatal accidents alluded to have all occurred in matches played after the Rugby rules, the dangers of which have been of late years much increased by the introduction of "picking up" the ball on all occasions, which encourages the practice of tight scrimmages. This week we have again to notice another fatal accident to a football player at Sheffield, death resulting from dislocation of the lower cervical vertebræ received in a scrimmage, and we have previously recorded two deaths from internal injuries lately received in football matches. As, however, arguments based on the sacrifice of life may be considered "narrow," we will endeavour to discuss the question on the broader basis of injury to health and limb; and for this purpose we take the description of a great match recently played at Sheffield in the presence of nearly 2000 people from the account which appeared in the *Sheffield Daily Telegraph*. It begins by saying "it is only by a very great stretch of the imagination that Rugby rules can possibly be termed football; certainly in this match the foot was actually used about a dozen times to propel the ball—but it is to all intents and purposes handball. The play consists principally of protracted scrimmages, garotting, legging, tripping, and tearing of clothing." The article goes on to state—"When a player is collared in his flight with the ball he at once says, 'Have it down!' About a dozen on each side gather round him and push and thrust in opposite directions, the one side to get it over the goal-line and then touch down for a try, and the other to prevent them. They surge and surge about in all manner of ridiculous positions until the ball emerges on one side, when it is caught up again by whichever side can get to it first, and away they rush, to be again dragged down to earth by the neck, legs, or arms." The truth of this description any of our readers can verify for himself by attending a match played anywhere under the Rugby rules. And we ask, Can all this indiscriminate struggling, pushing, and tearing be dignified by the title of "game"? Surely it is a mere matter of weight and strength, whilst the opinions that we have received from members of our own profession are almost unanimous that the strain thrown on the backs and chests of the players is far too great, that it does frequently lead to present injury and also to evil effects that may last through life. A list of accidents occurring in one club alone during a single season has recently appeared in the *Birmingham Daily Post*. They are as follows: (1) a broken thigh and leg; (2) a dislocated collar-bone; (3) a broken collar-bone; (4) some serious internal ruptures; (5) broken bones of ankle; and (6) serious injury to knee-joint. Only the other day we saw a gentleman, still quite a young man, suffering from valvular disease of the heart, the primary cause of which was undoubtedly due to injury received in a football match. Previous to that match he had been hale and hearty, but immediately afterwards his medical attendant discovered the cardiac lesion (aortic regurgitation). Again, we could point to cases where a wrench received in one of these struggles has laid the foundation of joint or spinal disease, the strain starting into action some constitutional taint which might otherwise have been outgrown. We have always especially advocated the physical training of the masses in our great towns, but we feel convinced that sports which are so rough and contain such elements of danger as football, as at present played, only injure the cause of "athleticism." This is not the first time that football has fallen under censure, and we believe we are correct in stating that in the time of James I. a prohibition was issued against playing the game, as being more likely to cause injury to the limbs of His Majesty's subjects than promote their health. If headmasters and captains of football associations wish to escape a like prohibition on the part of parents they will do wisely to revise the present rules, and make the game one more of skill than of brute force.

CONVALESCENT HOMES.

THE speech of Mr. Gladstone at the Mansion House on Tuesday makes it clear that he has given his attention to hospitals as well as to Homer. It was a most characteristic piece of oratory. The most practical questions in hospital management were touched with a master's hand, and the "fountain of love" which supplies the funds and the service for hospitals was unsealed. Charity reformers were gratified by Mr. Gladstone saying, in a shorter sentence than usual—"I belong to that section of the community who believe that the system of election for charities, with the extensive operations that it entails, is a most ingeniously contrived machine for intercepting on their way to other benevolent ends a large portion of the alms of the community." The words were received with cheers, which mark the steady progress of the opinion that, in such institutions as hospitals at any rate, the admission of cases should be, to use Mr. Gladstone's words, according to the greatest merit—that is, to the greatest need. Mr. Gladstone made a great point, in advocating the claims of Mrs. Gladstone's Home, of this fact—that in the expenditure only five per cent. goes for management; that is, 95 per cent. goes straight to those for whose benefit the institution is intended. Mr. Gladstone can never be wasteful, even in a charitable institution; but it is only fair to add that this modest expenditure on management is greatly due to the large amount of service which is given gratuitously or for a merely nominal sum. It is a great inducement, however, to give to a charity to know that what is given goes straight to the point.

After the meeting of Wednesday, with the excellent speeches of the Lord Mayor, the Bishop of Ely, Sir Edmund

May Currie, Mr. Gladstone, &c., it is to be hoped that not only Mrs. Gladstone's Home will be put upon a satisfactory footing, but that such institutions will be multiplied until every hospital is in a position to transfer its convalescent patients to convalescent surroundings and conditions. This will relieve the hospitals, and make way for other suitable cases, while it will greatly further and establish the recovery of patients. The argument from the increasing wealth of the community and the need for the rich helping the poor cannot be stated in more forcible terms than those of Mr. Gladstone. The homes of the poor, especially in London, are increasingly unfavourable to convalescence; neither are hospitals places to convalesce in. Hence the need for convalescent homes and the high luxury of supporting them. We should advise every man to have at least one convalescent home on his list of most commendable charities, even if subscribing to it shortens his own convalescent holiday by a day.

THE LONDON SUBURBS.

IN the annual summary of the Registrar-General recently issued, attention is drawn to the unsatisfactory sanitary condition of "Greater London"; that is, all those parishes which are within a circle struck with a radius of fifteen miles from Charing-cross. We are not surprised to learn that these evils, to which we have frequently drawn attention, are on the increase. Only a few weeks since we drew attention to the poisonous state of the ditches and watercourses in the localities around London, from their conversion into drains; we likewise pointed out the dangers arising from the employment of cesspools in close contiguity with water drawn for drinking purposes. On this point the Registrar-General remarks:—"The immense and increasing population of the outer ring is practically without sewers; the houses have cesspools in which the refuse is accumulating; how long this can go on with impunity it is impossible to pronounce." Other evils besides defective drainage and water-supply injuriously affect our suburbs, and one certainly is the want of municipal organisation, which prevents any scheme for improvement being taken in hand and carried through. Again, the manner in which houses, badly constructed and with defective sanitary arrangements, are allowed to be run up, shows that the duties of the surveyors are often performed in a very perfunctory manner. Nor is this surprising when we consider the very poor salaries attached to these berths, which certainly are not sufficient to encourage efficient men to accept them, and if held by men of weak principles are considered as sufficient excuse for taking the perquisite for passing "scamped work." Hence the construction of houses that the rattle of a passing train is able to shake down as easily as if it were a child's card house. Labouring under such adverse conditions, we are not surprised to hear that fever has become more fatal in the outer ring than in inner London.

FLOGGING AT SCHOOLS.

THE question as to the propriety of inflicting corporeal punishment on boys has recently been revived, and a warm discussion is taking place on the subject in the columns of some of our contemporaries. We have always expressed our strong dislike to the practice, as acting injuriously, both morally and physically. Punishment of this kind inflicted for "idleness," "obstinacy," or by whatever term masters choose to designate a boy's incapacity or unwillingness to perform his daily task, ought to be entirely prohibited. In many cases this idleness or obstinacy is the result of the master's ignorance, or of the boy's inaptitude or the natural bent of his mind; the "dull and idle boy," who has had Latin and Greek flogged into him at school, has frequently distinguished himself later in life in some other branch of learning, when once put to congenial tasks. Even when the unwillingness to learn is the result of obstinacy, surely flogging is not the remedy for such a case. Modern experience in the treatment of the insane shows us that the most sulky and refractory patient will yield at last to kind and judicious management, without recourse to terrorism and violence. Nor ought flogging to be inflicted for breaches of discipline; these in the majority of cases are usually the result of high spirits, and rarely the outcome of really vicious natures. Besides, we do not believe that vice can be flogged out of a boy any more than it can out of a horse or any other animal to which it is generally applied as a corrective. If a boy is really and determinately vicious, he ought to be removed from school, as, in spite of all punishment that has ever been devised, nothing will check his evil influence over his companions. A vicious boy is, however, we are thankful to say, a somewhat rare occurrence; and when we do meet with such a case, we find it usually allied to disease, and inclines us rather to pity than to anger. Such boys ought to be placed under special care and training; they are as dangerous in a large general school as a madman would be, if allowed to go unrestrained.

HENRY LETHEBY, M.B., PH.D.

WE regret to announce the death of Dr. Henry Letheby, whose name has long been familiar to the public in connexion with sanitary matters generally, but more particularly as associated with subjects relating to medical and chemical jurisprudence. He had for many years held the post of Lecturer on Chemistry and Toxicology in the Medical School of the London Hospital, as well as that of Medical Officer of Health and Chemical Analyst to the City of London. The latter post, however, he resigned about two years ago. At the time of his decease he was sixty years of age, having been born in 1816. He took his degree at the University of London as Bachelor of Medicine in 1843, and was also a Master of Arts and a Doctor of Philosophy, as well as a Fellow of the Chemical and Linnæan Societies. In addition to his reports on the sanitary condition of the City of London, Dr. Letheby was the author of several works, and of numerous papers contributed to the scientific societies and the medical journals on toxicological, sanitary, and other scientific subjects.

THE STIMULATION OF PAUPERS.

SHOULD the question whether alcohol is or is not injurious be decided in the negative, there will remain the question how far it is a necessity, or a luxury; how far it can be dispensed with in health and in disease without loss. Indeed, the latter problem already presses urgently on those who have the dieting of large numbers of the sick and infirm, and especially on the managers of our unions and poor-law infirmaries. The amount of alcohol consumed in some of the larger of these institutions reaches in the course of the year a very considerable quantity, reducible to startling figures, and its cost is an important item in the annual balance-sheet. A strong outcry is being raised at Leeds against the amount of alcohol consumed in the parish infirmary there, and from Wrexham we have the account of an experiment on the entire disuse of alcohol extending over three years. Dr. Davies, the medical officer of the Wrexham Workhouse, apparently believes alcohol to be injurious under every conceivable circumstance, and has entirely discontinued its use as a daily beverage and as a medicine. He states that he has treated low forms of erysipelas, typhoid fever, inflammation of lungs, delirium tremens,

&c., with success without its aid—a fact in which there is nothing very remarkable. It is interesting that he has found the death-rate a little less during the three years in which alcohol has been discontinued, than in the three years previous, in which alcohol was employed. The numbers are too small to justify any positive conclusion, and any statistics would be of little value, however extensive, without the actual details of the nature of the diseases so treated. It is a well-known fact that inhabitants of rural districts need stimulation far less, and bear it worse, in their acute illnesses, than residents in towns. This fact must be taken into consideration in estimating the value of results.

THE ETHICS OF CIRCUMCISION.

IT is no matter for surprise that the morality of circumcision is occasionally made the subject of serious question. The rite is of repulsive character, repulsive in itself and repulsive also in the way in which it commonly has been, perhaps is now sometimes, performed. The practice is a religious ceremony bound up intimately with the history of the Jews. Inculcated by what is to them the highest authority, it is justified on prudential and utilitarian grounds. Regarded superficially, we are not surprised to learn that a writer in a provincial newspaper denounces it as an "act of cruelty," "an outrage upon the laws of nature." But there can be no question that in its effect it is often beneficial and is sometimes needed as a remedy for sensual practices. Possibly the general adoption of the operation would be attended with a general improvement in physical and moral stamina. It is the opinion of some who know much of their character, that sensual tendencies are stronger among the Jews than among Christians. If so, the maintenance among them of the rite in question has a still more pertinent justification. But its performance should be divested of all the needlessly repulsive character which has for long attended it. It is impossible to justify the semi-public character of the act and the clumsy and disgusting way in which it often has been performed. The operation should be a private one, performed by a surgeon, not by a priest, and the religious ceremony should be dissociated from the surgical proceeding. We cannot but think that such separation would be grateful to the Jewish laity, however distasteful it might be to their clergy.

FATALITY OF EPIDEMIC DISEASES.

THE recently published Report of the Chairman of the Metropolitan Asylums District Board contains some very valuable statistics bearing upon the comparative mortality among the cases of scarlet, enteric, and typhus fever cases treated in the Asylum hospitals during last year. These figures and calculations are valuable, not only because the number under treatment was large enough to give reliable average results, but because the Report describes the method by which the percentage was obtained, which is too often omitted in hospital reports. In the three Asylum District Fever Hospitals in use during 1875, there were 1375 cases of scarlet fever under treatment, and the rate of mortality was 13·1 per cent. Among 379 cases of enteric fever the mortality was 23·2 per cent.; and the deaths among 96 cases of typhus were equal to 21·4 per cent. As regards the fatality of scarlet fever treated in hospital, but few trustworthy statistics exist wherewith to compare the above figures, which show about a death to every eight cases. The percentage of deaths to cases of enteric and typhus fever, however, appears high. The Registrar-General, in his 25th Annual Report, published some figures furnished by Dr. Murchison, showing the result of 6510 cases of fever treated in the London Fever Hospital; these gave a mortality of but 15·1 per cent. In the Netherfield Hospital for Infectious Diseases at Liverpool, the death-rate from enteric and typhus fever in 1875 was equal to 24·3 per cent., and was slightly higher than in the Metropolitan Asylums Board Hospitals.

THE COLLEGE OF SURGEONS AND THE QUALIFICATION IN MIDWIFERY.

WE have much satisfaction in stating that Dr. Arthur Farre and Dr. Priestley have tendered their resignations, intending them to take *effect at once*. We hear that amongst the many reasons by which they have been influenced, one of the most potent has been that there is no precedent for admitting to examination persons who cannot subsequently, under the existing laws of the College, acquire there any higher and more perfect qualification.

It was originally understood, we believe, by the Examiners, that the Midwifery licence was intended to be held in addition to other qualifications either already obtained or obtainable, and the idea was not entertained by them that it was likely to stand as the *only* qualification admitting any one to the Medical Register.

THE FREE SYSTEM AT BIRMINGHAM.

THE Queen's Hospital having, after much discussion, adopted the "free system," its progress naturally attracts attention. At the annual meeting on the 27th ult., presided over by Lord Leigh, the treasurer stated that since the free system came into operation on the 2nd Jan. last, 2133 patients had been treated, and £106 has been received from the shilling registration fees. Subscriptions amounting to £64 16s. 6d. had been withdrawn, but new subscriptions to the amount of £87 19s. had been received in consequence of the adoption of the free system—the workmen of one firm alone promising an annual donation of ten guineas,—and the net gain to the funds amounted to £129 15s. 6d.

The supporters of the privilege system, who have withdrawn their support, will, we trust, set aside all considerations as to the respective merits of the free or privilege system, and only look to the good which such a hospital is conferring on the sick poor of Birmingham and its vicinity

THE PLAGUE.

THERE is now no doubt, according to Levantine papers, that a serious extension of plague has begun in Mesopotamia, a continuation of the prevalence of the disease on the Lower Euphrates last year. As early as February plague was reported to have appeared on the river at a place in the vicinity of Anah. Hillah has now been attacked, and since the commencement of the present month the malady has appeared in Bagdad. Plague was last prevalent in Bagdad in 1831-34, and it is believed that between the 28th March and the 29th April, 1831, not less than 60,000 persons were killed by the disease among a population estimated at 150,000.

IT is pleasant to have to record an instance of prompt support given to a workhouse medical officer who had been called upon to resign by the guardians under the following circumstances:—Mr. Ashburner, the medical officer of the Horsham Union Workhouse, had found it necessary to bring under the consideration of the guardians certain irregularities of the master of the workhouse, consisting in that officer having issued rations under weight, neglected to comply with medical orders, altered supplies contracted for, &c. The guardians appear to have resented this action of Mr. Ashburner, and he was called upon to resign his post, on the ground of having disagreed with the master of

the workhouse, and so weakened his authority and lessened the discipline of the house. The Local Government Board has, however, expressed its disapproval of the course taken by the Board of Guardians, and refused to assent to it. The Board, moreover, stated that if the guardians were desirous to have an investigation of the charges made by the medical officer against the master it would direct an inquiry to be made; but the guardians seem to have considered that "it was perfectly useless to take any further trouble in the matter, as it was quite evident the Local Government Board would take no notice of them if they did." A significant comment on their previous action!

HER MAJESTY the Queen has been pleased to confer the distinguished service pension of £100 per annum, vacant by the death of Surgeon-General Sir David Dumbreck, K.C.B., on Deputy Inspector-General of Hospitals Joseph Burke, late Surgeon-Major 3rd Regiment ("The Buffs.") Mr. Burke entered the Army Medical Department in 1840. He served with the 50th Regiment throughout the Sutlej campaign of 1845-46, and was present at the battles of Moodkee, Ferozshah, Aliwal, and Sobraon (medal and three clasps); in the two last engagements, and to the end of the war, he was in medical charge of the regiment; served with the Buffs at the siege and assault of Sebastopol, from 1st May, 1855 (medal and clasp and Turkish medal); also throughout the campaign of 1860 in China (medal with clasp). He was some time principal medical officer at Tientsin, China, where he organised the General Hospital for the sick and wounded returning from Pekin; was also principal medical officer of the British Contingent of the Anglo-French force employed in Greece in 1854-55, &c. Mr. Burke is a graduate of Arts of Trinity College, Dublin, and a Licentiate of the Royal College of Surgeons in Ireland.

A FEW days ago the students of the medical school of the Andersonian University, Glasgow, presented Dr. Ebenezer Watson with a testimonial, in the form of a marble timepiece, surmounted by a bust of Diana. The proceedings took place in the large hall of the university. Mr. Webb, the spokesman on the occasion, explained that they were there "to present Dr. Watson with the tail of a testimonial, the head of which was given at the commencement of the session in the form of a written document, signed by all the students." The timepiece, which is said to be a splendid specimen of workmanship, bears the following inscription:—"To Ebenezer Watson, M.A., M.D., by the Students of the Andersonian Medical School, Glasgow."

DR. B. W. RICHARDSON, F.R.S., a few days ago delivered an interesting address at the Jews' Infant School, Whitechapel, on the "Vitality of the Jews and the Mosaic Sanitary Code." Dr. Richardson, with his usual lucidity and force, laboured to prove that the ancient people are preeminently gifted with tenacity of life—a power of resisting disease that neither time nor persecution can impair. Three special reasons were assigned for this high vital capacity—an innate vital power; the observance of the rules of health laid down in the Pentateuch; the fact that the Jews follow, either from necessity or predilection, better laws for maintaining a healthy physical existence than Christians.

THE first stone of the new Lambeth Infirmary was laid last week by the chairman of the Board of Guardians. The new building, which will accommodate 278 male and 357 female patients, will consist of six isolated blocks, each block communicating by corridors. A medical officer's residence and other necessary departments will be erected, while provision will be made for isolating cases of infectious disease. The estimated cost of the infirmary is £50,000.

WE are glad to observe that a proposal, made at a late meeting of the Gateshead Board of Guardians, to take down and remove the temporary fever hospital in the town, and in future to treat fever patients at their own homes, was rejected. Zymotic disease is prevalent in the town, and the change proposed might prove very disastrous. It is strange to find that the motion was made by Major Cowen, who subjected himself to correction by his presumably less instructed fellow guardians. When influential members of local authorities are hopelessly wrong on matters of health and disease, it is not surprising that occasionally actions of a most suicidal nature are determined on and carried out.

THERE were registered in London last week 1615 deaths, giving an annual rate of mortality of 24 per 1000. There were included 1 from small-pox, 63 from measles, 37 from scarlet fever, 3 from diphtheria, 94 from whooping-cough, 15 from different forms of fever, 10 from diarrhœa, and 371 referred to diseases of the respiratory organs. The latest returns from India show that cholera is prevalent in Calcutta and Madras, while small-pox continues to increase in Bombay, where in one week 203 deaths occurred from that disease.

THE *conversazione* of the Obstetrical Society of London will take place on the 10th of May. There will be an exhibition of obstetrical instruments. It is asked that gentlemen having in their possession any interesting specimens of ancient or modern instruments, or models of such instruments, or any rare portraits of medical men, will kindly lend them for the occasion, and communicate without delay with the secretaries.

MR. GEORGE GOFORTH WYER, who was charged at Nottingham with keeping a lunatic (being his sister) in his house without having obtained the necessary licence, and, further, with ill-treating and neglecting the said lunatic, has been sentenced to be imprisoned for three calendar months.

A LATE distinguished Fellow of the Astronomical Society bequeathed his body to King's College Hospital for purposes of dissection. In compliance with his wish, his body has just been subjected to the process of dissection.

THE statues of Linacre, Harvey, and Sydenham, the work of Mr. Henry Weekes, R.A., have now been placed in their destined niches in the Royal College of Physicians.

THE WATER-SUPPLY OF LONDON.

THE members of the deputation from the National Health Society, who had an interview with the Home Secretary last Tuesday on the subject of improving the water-supply of London, had a strong case, and had they been unanimous in their recommendation of a definite plan for its improvement their position would have been unassailable. A difference of opinion seemed to exist, however, among the members of the deputation, as to whether the Thames water might not, by proper conservancy, be made available as a source for the supply of pure drinking water for the metropolis; or whether it would not be best to obtain the supply direct from the Welsh hills; or whether, by proper treatment, the basin of the London clay might not be made to yield an adequate and pure supply. When such difference of opinion prevails among the members of a deputation as to the proper course to be pursued to remedy evils has complained of, it is easy for a Minister to shirk

the whole question, by stating that it would be wrong for him to take any definite course in the matter whilst such divergence of opinion exists as to the efficiency of the remedies suggested, and the practicability of carrying them out. We hope, therefore, the National Health Society will take the matter into consideration, and shortly urge upon the Government some definite course of action. There were two points, however, on which the deputation were unanimous: first, the adoption of a constant supply throughout London; secondly, that the several water companies should be bought up, and the water-supply of the whole metropolis be placed under the regulation of a central authority. We fear, however, it will be impossible to obtain the advantage of a constant supply without having first to purchase up the existing companies, who, no doubt, will make as hard a bargain with the public as they possibly can. Yet we hope that the Government will sooner or later see their way to putting an end to a monopoly which has sought for profit and advantage at the expense of the public good.

DR. RICHARDSON'S LECTURES ON INDUSTRIAL PATHOLOGY.

III.

(*Concluded from p. 445.*)

THE vapour of *turpentine* was the first of the vapours considered. Much credit is due to M. Marechal de Calvi for his original researches on the influence of turpentine vapour on the health of men who use turpentine largely in the arts. Before his labours, it was commonly considered that the lead in paint is the only cause of the diseases which painters in oil and lead colours suffer from their employment. De Calvi showed that the emanations from the painted surface, given off when the lead is fixed, consist purely of turpentine, and that the symptoms induced by these are perfectly characteristic from those arising from lead. The symptoms are most commonly developed during the process of flatting. They consist of coldness, constipation, disturbed nervous function, intense headache, which lasts for many hours, impairment of appetite, and anæmia. These symptoms are produced from the use of turpentine-varnishes as well as from paints. Some workmen escape the action almost altogether; others are so susceptible that they will rather pay more favoured men to perform the job than do it themselves.

The mode of action of turpentine on the body is not yet fully understood. When it is rapidly inhaled as a vapour it produces sleep like chloroform, and it has indeed been used in an emergency as a substitute for chloroform, in order to bring on anæsthesia. A key to its action was given some years ago by Dr. L. C. Roche, who, in commenting upon the researches of Marechal de Calvi, relates an interesting fact told to him by the illustrious chemist Thénard. It is that Thénard analysed the atmospheric air of a cellar which had become poisonously charged with the vapour of turpentine, and found that all the oxygen had been removed, so that nitrogen alone remained. Hence, Roche assumes that turpentine produces its bad effects by depriving the air of oxygen.

The vapour of *bisulphide of carbon*, originally known as the alcohol of sulphur, and then as sulphuret of carbon, came next under review. This bisulphide has of late years come into great use in various industrial pursuits. It is employed for removing grease from wool, for the extraction and purification of paraffin, for extraction of oil from oil-cakes when pressure is of no farther use, for draining the sawdust used in refining oil by filtration, for extracting grease from bones or kitchen refuse, and for extracting aromatic essences and perfumes from plants. The bisulphide is also used for the purpose of dissolving caoutchouc in the making of impermeable varnishes, and for softening the substance in the process of blowing the toys used by children, and called air-balls or balloons. The disease produced by the prolonged inhalation of bisulphide of carbon in vapour is a disease *sui generis*. It was first described by M. Delpech in the Academy of Medicine of Paris, on January 15th, 1856. The symptoms are peculiarly severe. They consist first of symptoms of anæsthesia, with intoxication. Afterwards they become more chronic, but the head is much affected at all times, and partial insanity not infrequent. The taste is vitiated; the sight and hearing troubled; the digestion perverted, so that the appetite is increased even to gluttony; and there is persistent nausea. The breathing organs, the organs of the circulation, and all the secreting organs are deranged, and such enfeeblement results that the workers, so long as they continue at their work, are simply wretched. The vapours of *nitric acid* and of *hydrochloric acid* were briefly noticed, then those of *aniline* and of *nitro-benzole*. The labours of Dr. Letheby on the subject of nitro-benzole were commented upon, and the observation of Chevalier on the action of vapour of *benzine* in producing intense headache was described and confirmed by additional experience.

From this point the lecturer proceeded to consider the action of *fumes* of various kinds. Some very simple occupations are attended with bad results from trifling causes. For fixing the hair of brushes, such as shaving brushes, a compound is made by pouring melted resin into boiled linseed oil. The workman dips tufts into this solution, and while leaning over it inhales the fumes of resin. Great distress of breathing and irritation are produced by this process. The cough is suffocative, and becomes in time chronic, with persistent irritation. Many workmen have to leave the business from these causes.

The fumes derived from the processes of smelting various metals are considered sources of danger, and under this head *copper fumes, fumes of mercury, of zinc, of phosphorus, and of lead* were noticed. The evidence relating to copper fumes was to show that a very minute amount of copper is present in the smoke, and the injury to vegetation which obtains in the neighbourhood of great copper-smelting furnaces, as at Swansea, is due to sulphurous and sulphuric acids, which condense with the rain and destroy the vegetation. The smelters do not seem to suffer from these fumes, and their families, who reside near the works, are healthy. The cattle feeding in the neighbourhood are less fortunate. They are affected with a disease which the Welsh grazier calls the "*clyvdod*." This disease is an inflammation of the pericsteum or membranous covering of the bones. The bones become thickened in the neighbourhood of the joints. There is inflammation of the joints with effusion of fluid into them. The bones are prone to fracture. The teeth sometimes fall out and sometimes become carious. These symptoms seem to be due to the presence of the sulphurous and sulphuric acids by which the grass on which the animals feed is rendered sour.

The effects of mercurial fumes in causing salivation, mercurial rheumatism, and mercurial tremors were briefly described.

Men engaged in bronze-founding are subject to serious symptoms from inhaling the fumes of oxide of zinc. The fumes rise to the mouth of the workman and settle on the lips, causing sometimes a whitish efflorescence. After long exposure to these fumes there are induced choleraic attacks, with shiverings and severe cramps in the muscles of the legs. Sickness is also induced, which may last many days, and the food that is taken seems to undergo a peculiar fermentative change, so that there is constant pyrosis or water-brash. In fact, the specific action of zinc on the animal economy, for the description of which we are specially indebted to Dr. Leo Popoff, is amongst the most singular that the study of industrial pathology affords. Disease from phosphorus in those who are engaged in the manufacture of phosphorous matches was noticed with care, but rather as belonging to the past than to the present history of disease. The phosphorous malady, it seems, which consisted of necrosis of the lower jaw, and was some years ago one of the most severe and loathsome of industrial accidents, is now of comparatively rare occurrence. Lundstrom's discovery of the mode of using amorphous phosphorus, and of making the match strike on the box, has to be thanked for this improvement, as well as for the greater safety from fire which the new match affords.

From the study of gases, vapours, and fumes, and of their action in inducing disease amongst the industrial classes, Dr. Richardson moved to the second division of his table of

injuries from industrial pursuits—viz., to injuries from exposure of the body of the workmen to chemical agents, soluble or in solution. In this division the effects of lead were discussed, and the different occupations in which lead is used in such a manner as to be dangerous to health and life were defined. The evidence was strong that in cases of poisoning by lead in industrial pursuits, such as painting, or the glazing of pottery, the lead is not absorbed directly by the skin, but that poison is swallowed by the mouth. The workman or workwoman, becoming careless, after a time takes up bread or other articles of food with hands soiled with lead; thus a little is taken daily, and in time the mischief is done. The cumulative action of lead on the body; the symptoms of colic and paralysis induced by it; the mode in which it produces its effects; the organs of the body which are specially affected by it; the reasons, or probable reasons, why the extensor muscles are more frequently affected by it than the flexors, formed topics on each of which a brief exposition was supplied.

Happy were it for those engaged in the branches of industrial pursuits in which poisoning by lead is so frequently an accident if the influence of the poison were limited to those only who are first affected. Unhappily, the mischief extends from the afflicted parent to the offspring. From the woman under the influence of lead-poison the disease extends to her unborn child. Still more strangely, from the father under the influence of lead-poison the induced disease extends to his children born after its implantation in him. In a remarkable essay on this subject, published in the *Archives Général de Médecine*, M. Paul shows, from observations made in the Hôtel Dieu, amongst other important facts, that of thirty-two of the offspring of seven men who were exposed to lead-poisoning, eleven infants were prematurely born, and one stillborn; that of the remaining twenty infants which were born alive, eight died in the first year, four in the second, and five in the third year, one only living beyond the third year. Thus, adds M. Paul, it is necessary to admit that there is a new variety of accident, hereditarily transmissible, which comprises disease produced by an inorganic body.

Correspondence.

"Audi alteram partem."

DEGREES IN MEDICINE AT CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—So much has recently been written on the subject of medical degrees, and the desire to obtain them at the old universities, especially in conjunction with the Arts degrees, is so much increasing, that I think it well briefly to state the relation in which the University of Cambridge stands with regard to medical degrees and medical education; the more so as changes have recently taken place whereby that relation has been rendered closer, one of these changes being that referred to in last week's number of THE LANCET, which gives to Human Anatomy a more prominent position in the Natural Sciences Tripos.

The principle is now acted on in the University that various subjects, besides the long-received standard ones of classics and mathematics, may be admitted into the educational area and be made avenues to its Arts degrees. Hence, provided a fair knowledge of classics and mathematics is shown, such a knowledge as can without difficulty be obtained at school, the pupil may at once proceed to other subjects of study—subjects, say, of natural science, and through them acquire a degree in arts with honours.

At the present time all the earlier, or what may be called first stage, subjects of a medical course—viz., physics and chemistry, botany, comparative anatomy, human anatomy, and physiology—are regarded as science subjects, and are accordingly subjects in the examination for the Natural Sciences Tripos by means of which an Arts degree may be obtained. Thus the preparation for the examination for an Arts degree and that for the first examination for a medical degree are much the same. The subjects are the same, the difference being that to gain a place, a good place at any rate, in the Natural Sciences Tripos, they must have been studied in a somewhat higher and more thorough manner than is necessary for a medical degree. In this manner, and by the addition of human anatomy to the list of honour subjects for the Arts degree, the University is fulfilling its mission of giving a more scientific character to medical study.

The course, therefore, for a medical degree at Cambridge, in combination with an Arts degree, may be divided into three stages, with the examination or examinations associated with each. First, the stage of general or school education (classics and mathematics) which may be completed before leaving school, and the examination in which may be passed, under the regulations of the Oxford and Cambridge Schools Examination Board (which may be purchased for sixpence of Macmillan and Co., Cambridge), before entrance at the University, or through the Previous Examination at Cambridge, in the first term of residence in the University. A well-grounded lad of seventeen or eighteen, one who is fit to come to the University, ought to be able to pass either of these examinations without difficulty. He can then give the whole, or nearly the whole, of the three years during which he is required to reside in the University to the subjects of the second educational stage, which comprises physics and chemistry, botany, comparative anatomy, human anatomy, and physiology. He will find ample opportunities here in the laboratories, dissecting-rooms, museums, and lectures, for the prosecution of these studies, and I need not say that they will provide him with sufficient occupation and hard work during the whole of his three years' residence in Cambridge; so that, if time is an object, he ought to pass his examination in classics and mathematics before he comes up, or as soon as he comes, in order that he may devote himself at once and uninterruptedly to these early subjects of medical education, and be fitted, during and at the end of his three years, to pass, if not to distinguish himself in, the examination for the Natural Sciences Tripos (whereby he obtains the B.A. degree), as well as to pass the first and second examinations for the degree of Bachelor of Medicine. He will probably during some parts of this time have been familiarising himself with the phenomena of disease by attending the practice of Addenbrooke's Hospital, but he cannot be expected to make much progress in that direction. The third stage is devoted to that for which the others are preparatory—viz., the study of disease and its treatment. This may be done wherever it is thought best, for, the required period of residence at Cambridge being completed, the student is at liberty to proceed to any recognised school which he may select; and at the end of this stage, which may last two or more years, he undergoes the final examinations, and is admitted to the degree of M.B.

Other courses may be pursued, but this is probably the best, combining, in the three stages I have mentioned, a good general with a good scientific and a good practical education, and giving a degree both in Arts and Medicine. The result cannot be obtained elsewhere in less time or with much less cost. The necessary expenses in college are by no means great, and the students are, for the most part, economical and careful. To the non-collegiate, or unattached, students, who enjoy the same University privileges as the others, the expenses are no greater than in other places, and some of these students live very cheaply. The University is perfectly open. Anyone may come and claim its benefits, whatever his station in life, his country, or his religious views. More real liberality, good feeling, and absence of mercenary or exclusive spirit, are rarely to be found; and they constitute not the least of the charms and advantages of the place.

I do not think, therefore, that there is much ground for the complaint that students are excluded from our degrees. It is chiefly their own or their advisers' fault if they are so. The facilities for obtaining them can scarcely be increased without lowering their value, and if they were as easy to obtain as other qualifications to practise, they would not be more worth the having, and would be no longer an object of ambition. They are that now, because they are regarded as implying a higher education, and this cannot be obtained without a proportionate expenditure of time and money. If new universities are opened for the purpose of granting degrees in medicine, either those degrees will be less esteemed than the degrees of the old universities, or they will be as costly and as difficult to obtain.

With regard to the admission of the senior members of the profession—of persons who have not gone through the university course—to our degrees, which has been referred to by yourself and some of your correspondents, the University would require to be convinced that some real benefit would be likely to result from this to the profession and the public. The proceedings of the University of St. Andrews have been mentioned, which gives me occasion to say that my experience as a visitor of the examination there, and my consequent conversations and correspondence with the professors of that University, have convinced me of the great difficulty of discharging such a function as this, whether by examination or in other ways, satisfactorily and advantageously. That the University of Cambridge has no inherent reluctance to undertake a duty of this kind is shown by the readiness with which it opened an examination for a certificate in sanitary medicine to all the registered members of the profession when it perceived that it could, in that manner, supply a want, and that it was in its power to do a good thing for the profession and the public. If a similar case can be made out in the case of its degrees in medicine, I doubt not it would produce a similar result. It must not be forgotten that a degree at Oxford or Cambridge is esteemed on account of the general, scientific, and social education which it implies. Divested of this it would cease to be an object of ambition, and rightly so; and if the suggestions of some of your correspondents were adopted we should, I fear, soon find that our medical degrees were so far curtailed of their fair proportions as to lose their attractions in the eyes of those who now desire to possess them.—I am, Sir, yours, &c.,

G. M. HUMPHRY.

Anatomical Museum, Cambridge, March 17, 1876.

THE SPHYGMOGRAPH IN MEDICINE.

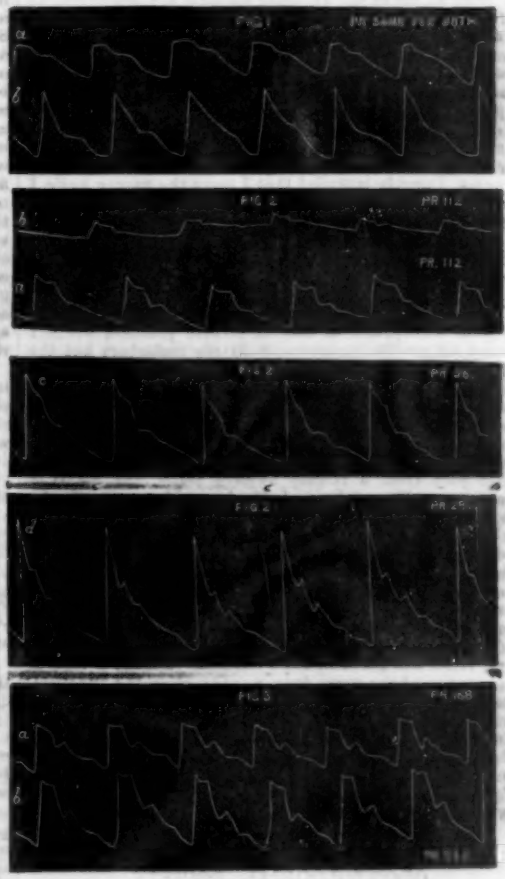
To the Editor of THE LANCET.

SIR,—I am sorry that the tracings I have given in my paper as indicative of the existence of arterial rigidity and increased vascular tension do not satisfy Dr. Inglis. He thinks that my lever-point pressed too strongly on the glass because the primary rise does not extend above the level of the rise of the tidal wave. Surely he does not mean to affirm that all flat-topped tracings are "abortive," and "do not truly write the character of the pulse." If so, such errors, I am afraid, are very common. Several of M. Lorain's tracings seem quite as objectionable as mine (see pp. 230, 232, 251, 238, 239, 235). If he does admit that flat-topped tracings may be true ones, why does he condemn mine? Unless he had examined the patients for himself, I do not think he is in a position to judge. The tracings themselves disprove, I think, Dr. Inglis's charge. In three of them the top in some or all of the beats slopes *upwards*. Now, if undue pressure of the lever-point on the glass cut short the primary rise, how comes it that it did not also prevent the tidal wave line from rising still higher?

I am well acquainted with the effect of excessive pressure of the writing-point on the glass, and subjoin a marked example of a false tracing made in this way, which I noticed and corrected at the time. Perhaps this may satisfy Dr. Inglis that I was not likely to commit the error he lays to my charge. (See Fig. 1, *a*, *b*, taken from a female, aged twenty, suffering from anæmia and debility; *a*, false tracing in consequence of lever-point pressing too much on glass; *b*, correct tracing with lessened pressure.)

The chief cause of the upstroke being cut short is, undoubtedly, the employment of an undue spring-pressure, to which Dr. Inglis does not allude. This is well seen in the subjoined figures, which tell their own story. The pressure may be too much or too little, yet the result may be the same. (See Fig. 2, *a*, *b*, *c*, *d*; and Fig. 3, *a*, *b*. Fig. 2 from male aged fifty-three; *a*, bowels confined some days; *b*, taken next day after free purging, with same spring pressure, 112; *c*, taken at same time, with pressure 56; *d*, with 28 grammes. Fig. 3, from male aged fifty-two. Pressure in *a*, too weak; in *b*, stronger, producing a higher rise.)

I may add that the tracing given by Dr. Inglis, illustrating his view, contains evidence that cutting short the upstroke does not essentially alter the significance of the tracing. In the five left beats the top is more or less flat, in the others it is peaked; but in all the latter there is evidence, in the projecting shoulder below the peak, of delay of the tidal wave—i. e., of increased arterial tension. The import of the flat top is the same, therefore the difference is more apparent than real. In Fig. 2 the difference between



b and *d* is apparently enormous, yet both indicate increase of arterial tension. The occurrence of high primary rise from diminution of the spring-pressure signifies that the radial artery is relaxed, and that the obstruction is in the arterioles or capillaries. The distinction between this state and that of rigid radials as well as arterioles—to which I maintain my cases belong—was made by me in the second part of my paper.

I may take this opportunity of mentioning the interesting fact that the prolonged second sound heard in Case 8 has now, six weeks later, developed into a well-marked diastolic murmur, audible at midsternum and xiphoid, but not at the apex. The valve has clearly given way under the arterial pressure.

I remain, Sir, yours very truly,

Green-street, W., March 21st, 1876. C. HANDFIELD JONES.

PUNCTURE OF THE TESTIS IN ACUTE ORCHITIS.

To the Editor of THE LANCET.

SIR,—It is a relief to read the temperate observations of Mr. Rivington on the subject of orchitis, and the treatment of this disease by puncture of the testis, and I am pleased to find that although this gentleman has not, as far as we can see, had any personal experience of the operation in question, he is willing to put faith in my statements, and

to admit that the surgeon who punctured the testis *may* do well. If Mr. Rivington will do me the favour to try this method in the next few cases of acute orchitis which he may meet with, and will then address some observations to you, I feel sure he will write, not that the surgeon *may* do well, but that, so far as his suffering patients are concerned, he does far better than by employing any other method. As, however, I felt bound to protest in the strongest terms against the use of the term "splitting up" of the testis, so I must ask Mr. Rivington to bear in mind in any future communication he may make, that I do not *divide* the testis. It is possible that in one of my communications I may have misled your readers, for I have been informed by more than one gentleman that in an earlier description of my proceeding, I made use of the term *free incision*. By this term, however, I merely intended that I carry the narrow knife I employ freely into the substance of the testis, as regards depth, not as to length or breadth of the incision. I use a narrow Syme's knife, but it is my intention to have an ordinary tenotomy knife set in a short curved angle, and to use that for the future. I believe it will do as well as the other.

With regard to the employment of ice, I am well aware of its great utility, and in fact in private practice, where I cannot so readily puncture, it is my mainstay; but the superiority of that measure to ice, leeches, or anything else is so great that I always recommend it in preference.

As a good and useful illustration of this I will refer to the case of a gentleman whom I attended in November last, and who called one day this week to see me on another matter. He was a fine young man, who sent for me whilst he was in great pain from a largely swollen testis, the result of gonorrhœa. He was living in the house of a surgeon who previous to this had been attending him for an attack of orchitis on the other side. Leeches had been freely applied, and the other usual remedies. He lay in bed for two weeks. When the second attack came on my assistance was requested. I at once punctured the testis. The relief was immediate, and in three days he was at his usual occupation. Here was a clear gain of eleven days as regards time; and in reference to relief from pain, instead of suffering for days, relief was given in a few minutes. I made a careful examination of the organ four months after the puncture. I cannot discover where it was made, and it is of the same size as the other. I amused and astonished him much when I told him that it had been gravely denied that this measure afforded relief from pain, and could bring about a speedy convalescence without any damage to the important organ affected. I am, Sir, obediently yours,

Wimpole-street, March, 1876. HENRY SMITH.

THE DENTAL PROFESSION AND THE ODONTOLOGICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—Like Mr. Sewill, I have also carefully read the recent correspondence which has appeared in your columns in relation to the new Association of Surgeons practising Dental Surgery and the Odontological Society. I cannot think that those who have advocated the cause of the latter body have been altogether discreet in raising a discussion upon its management, inasmuch as I can assure them that had it not been for a very gratuitous assumption on the part of some that the new was certainly antagonistic to the old Society, the subject in question would never have been broached by any member of the new Association. Under your auspices, the discussion has been conducted so temperately, and your views as to the position of the two Societies have been so fully maintained, and indeed so materially strengthened, by the statements of those who are opposed to them, that it seems to be almost unnecessary to answer the letters of Mr. Turner and of Mr. Sewill.

I think that the names and position of some of the supporters of the new Society are quite a sufficient rejoinder to the last-mentioned gentleman's assertion that there is no valid *raison d'être* for its formation; and, indeed, the fact, mentioned by him, that at least one of them has been amongst "the most active and valuable members" of the council of the Odontological Society, is a proof that even those most interested in the welfare of that body have seen a reason for the existence of the new Association.

There is no need to prove the fact that the Odontological Society is, by its constitution, a scientific and not a political body, and Mr. Sewill must surely know that the determination of the necessary curriculum for the licentiateship was not the work of its hands. Moreover, your imputation of laxity in the rules regulating admission to the Society has never been disproved; indeed both Mr. Turner and Mr. Sewill, though aggrieved at the charge, do not attempt to deny the grounds upon which it was based—viz., the admission of unqualified persons to its membership, whilst both seem to think that more stringent rules in this respect might be adopted with advantage, Mr. Turner frankly admitting that it might be urged with reason that "certain laws" are "too lenient." Amongst those so classed there is one even more objectionable than that by which unqualified persons can gain admittance to the Society. I allude to the regulation by which those who have been in the habit of advertising are permitted the rights of membership on desisting from such a practice during the space of one year; which rule would alone explain Mr. Sewill's confession that "members have occasionally steered dangerously near the limits of professional law," and affords additional proof that the laws of the Odontological Society are—I will not offend by saying somewhat *lax*—not very rigid.

Were I supporting my cause in opposition to the Society in question, instead of being willing to concede to it full credit for any useful work it may have done, I might strengthen my case by referring to some recent events which might prove that not even members of the Council are invariably successful in their attempts to bring about greater stringency in the interpretation of its laws. But, as Mr. Sewill suggests that such laws are not unchangeable, and that any person is at liberty to propose their alteration, it is only fair to mention that the proposition "that a qualification ought to be the *sine qud non* of membership" has been brought forward unsuccessfully more than once, and those who have desired and proposed this salutary change will feel themselves greatly indebted to you if your able criticism be the means of rendering their hitherto ineffectual efforts effective.

But I will pursue this subject no further, inasmuch as the new Association has no desire to confirm its position by depreciating that of another Society to which it has no antagonism whatever, and which it hopes and believes will be ultimately benefited by the present controversy. I will not suggest that Terence's expression, "Suo sibi hunc jugulo gladio" is applicable to either of the gentlemen to whose letters I have replied, but would wish it to be understood that those with whose views I so strongly sympathise have not been the originators of this discussion, and are not therefore responsible for its results; whilst, finally, I can only say that the new Association has the highest interests of the dental profession at heart, its objects being to improve the status of the specialty which it represents by every means in its power, and to impress upon all those who practise it the great advantage of becoming fully qualified members of the medical profession, for liberal education and a high standard of qualification are more effective in elevating the position of a profession than any amount of legislative interference.

I am, Sir, yours faithfully,

March 27th, 1876. S. HAMILTON CARTWRIGHT.

Obituary.

JAMES SIMSON, M.D., F.R.C.S. ED.

DR. SIMSON died at his house in Edinburgh on March 8th. He was one of the oldest practitioners in that city, having obtained his diploma as a Licentiate of the Royal College of Surgeons of Edinburgh in 1815, having graduated in the University of Edinburgh in 1816, and having obtained the Fellowship of the College of Surgeons of Edinburgh in 1825. During the fifty years and more that he has been a Fellow of the College of Surgeons he has been called upon to fill numerous offices of trust and distinction in that body. He enjoyed the very rare honour of having been twice elected as its president. For many years he acted as its honorary secretary, and was long a mem-

ber of its Council and of its Examining Board. He was the son of a country clergyman of the Established Church of Scotland, of which Church he himself was a staunch adherent all his life, and for a number of years also an elder.

When he came to Edinburgh to study medicine he served an apprenticeship—as was the custom in those days—with the late Sir William Newbigging, who was long one of the leading medical practitioners of Edinburgh. Dr. Simson, after obtaining his medical qualification, settled in Edinburgh, and after a time succeeded in establishing himself in an extensive family practice, which he continued to enjoy down to a very few months before his death. He was a sound and safe practitioner, and very popular with a large circle of patients. For forty-four years he was surgeon to the prisons of Edinburgh, an office which he performed both assiduously and conscientiously, and which he only resigned when compelled by bad health, several months before his decease. Dr. Simson was a popular citizen of Edinburgh, who knew almost everybody of note, and was himself very generally known. He had even to old age the elasticity and buoyancy of youth; in fact, he never was an old man, either in his habits, which were always active, or in his appearance, which was almost invariably cheerful. He was a favourite in general society, where he mixed freely. He was also a very acceptable member of some of the social medical clubs, which form a peculiar feature of the medical society of Edinburgh, where the *élite* of the profession meet together to dine or sup frequently in the course of the year, to forget for a time, in the charms of sprightly and intellectual conversation, song, fun, and sentiment, the anxieties of their arduous and *exigeant* profession. There Dr. Simson was in his element and ever welcome. He did not marry till a comparatively late period of life, when he was united to the daughter of Dr. Combe, an eminent medical practitioner in Edinburgh. He is survived by his widow, and by two children, a son and a daughter, who are both young.

His last illness may be said to date from March, 1875, when he unfortunately met with a severe fall in the street in frosty weather. It did not seem serious at the time. Though for six or seven months afterwards he continued to practise his profession, yet his step became obviously less elastic; he walked lame, and after a time began to suffer some pain in the region of the hip-joint, apparently of a neuralgic character. From last October he was compelled to keep the house, and was little out of bed. Latterly, though the pain had greatly abated, yet from the shock his system had received, and from the deprivation of his wonted active exercise, he continued to languish and pine away, till at last he died on the 8th March.

Singularly enough, he had always said that he would die on the 8th March, and in daylight, and so it turned out. He has died after a long and prosperous career, in good old age, regretted sincerely by a large circle of friends and acquaintances.

SIR JOHN CORDY BURROWS.

IT is with deep sorrow that we announce the death of Sir John Cordy Burrows, of Brighton. He expired a few minutes after ten on Saturday morning last, in the 63rd year of his age. Sir John was the son of Robert Burrows, Esq., of Ipswich. He was a Justice of the Peace for the borough of Brighton, of which he had been three times Mayor. He was knighted in 1873, after his third mayoralty, at the request of his fellow-citizens, who two years previously had honoured him with a public presentation of a testimonial, consisting of a model in silver of the fountain on the Steine (weighing 192 ounces), a silver tea and coffee service, and a carriage and pair of horses. In Cordy Burrows, Brighton has lost a man who, for the last thirty years, occupied a foremost place in every movement for the improvement of the town and the benefit of its inhabitants. Early in his career he started the Literary and Scientific Institution of the town, and in time founded many kindred institutions. He highly appreciated the good effects of public grounds and gardens, with trees and flowers, and the laying down of the Steyne inclosures entirely at his own cost was one of the many good deeds which endeared him to his fellow-townsmen. He became an active member of the Town Council, and some of his happiest days were connected with it. The third time of his election to the mayoralty was on the occasion of the visit to Brighton of the British Association of Science, when he entertained its chief members with splendid hospitality. He was intimately identified with the Aquarium, of which he was a director and up to the time of his death vice-chairman. He was also chairman of the Lifeboat Committee and one of the committee of the Brighton branch of the Royal Humane Society, to which he acted for three years as honorary secretary. "Amongst his other virtues," says the *Brighton Herald*, "he had a hand open as the day to charity. He might have been a rich man if he had chosen; but he preferred to be a useful man, to do the work of the public, and he was never so happy as when doing it. Indeed, his life was work; and sure we are that he himself would have elected to cease to be as soon as he ceased to be useful to his fellow-men."

SIR JOHN W. FISHER.

THE death of Sir John William Fisher, many years Surgeon-in-Chief to the Metropolitan Police Force, one of the oldest and most esteemed members of the profession, took place on the 22nd of March, after a long and painful illness, in the 89th year of his age, at his residence, Grosvenor-gate, Park-lane.

A son of the late Peter Fisher, Esq., of Perth, N.B., he was born on the 30th of January, 1788, and became a member of the Royal College of Surgeons of England in 1809, and was elected an Hon. Fellow in 1844. He was appointed surgeon to the Bow-street Patrol in 1821 by Lord Sidmouth, and was promoted to the post of Surgeon-in-Chief to the Metropolitan Police on its establishment in 1829 by Sir Robert Peel. He received the honour of knighthood from the Queen in 1858, and retired on a pension in 1865. His successor in the appointment is Mr. Holmes, of St. George's Hospital.

In private life there was no more hospitable and genial member of society than Sir John, and among his intimate professional friends were many of the most distinguished members of the profession.

During the whole course of his long illness, which he bore with great fortitude and cheerfulness, he was attended by his old friends, Sir William Fergusson and Mr. Hird, and also had frequent friendly and professional aid from Sir George Burrows, Sir James Paget, the Drs. Williams, Mr. Curling, and other friends. To the last he never failed to express the comfort afforded him by seeing so many of his professional friends around him, and was most grateful for their attention. Sir John Fisher was twice married. His first wife, Louisa Catherine Haymes, eldest daughter of William Haymes, Esq., of Kibworth Harcourt, Leicestershire, he married in 1829. His second wife, Lillias Stuart Mackenzie, who survives as his widow, and whom he married in 1862, is a daughter of the late Colonel Alexander Mackenzie, of Gruinard, Ross-shire.

He was buried in the family vault at Kensal-green Cemetery on the 29th ult. Many friends attended the funeral, and six of his medical friends of oldest standing were the pall-bearers.

In compliance with the wish of Sir John, Lady Fisher will give donations of £100 to the Royal Medical Benevolent College at Epsom; £100 to the Society for Widows and Orphans of Medical Men; and £50 each to the Westminster and St. George's Hospitals.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on March 23rd:—

Hill, Alfred Bostock, Winsor-green, Birmingham.
Lawson, Thomas Cornelius, Ashton, Birmingham.
Little, Henry Selby, London-street, Reading.
Wilmot, Thomas, Fenton, Lincolnshire.

The following gentlemen passed the Primary Professional Examination on the same day:—

Richard Broughton Bothamley, St. Thomas's Hospital; Percy Turner Jones Head and John William Gore Selloe, University College; Charles Arthur Squire Ling, London Hospital; Evan William Pryce and George Rutland Howat, St. Bartholomew's Hospital.

THE will of Dr. Henry Hardinge, who died on the 28th January, has been proved under £25,000.

MR. R. S. ARCHER, M.B., has been presented with a testimonial on relinquishing the office of house-surgeon to the Weston-super-Mare Infirmary.

MR. MILNER, Chairman of the Keighley Board of Guardians, has been fined 10s. for refusing to vaccinate his child. He declined to pay, and was therefore sentenced to fourteen days' imprisonment.

DR. F. N. MACNAMARA, whose name is connected with the establishment of the Campbell Medical School and Hospital, was, on his recent retirement from the post he held at the Medical College at Calcutta, presented by the graduates and students with an address, expressing their sorrow at the prospect of his departure from India. His name is to be preserved in the College by the foundation of a Chemical Prize.

ABSORPTIVE POWER OF MILK.—Attention has been called in the daily papers to a practice prevalent in some parts of the country, which appears to illustrate the power possessed by milk of absorbing atmospheric impurities. It is that of placing a saucer of new milk in a larder, to preserve meat or game from taint. It is said that not only does it answer that purpose, but that the milk after a few hours becomes so bad that no animal will touch it.

A PAPER just issued by the Howard Association ascribes a large amount of the prevalent intemperance in the use of alcoholic beverages to (1) the improvidence fostered by the Poor Law, which gives no advantage to the thrifty and industrious person over the reckless one, when either applies for relief; and (2) to the failure of the Legislature to furnish the poorer classes with effectual protection against being victimised by the mismanagement, or even fraud, on the part of clubs and many so-called "benefit societies," numbers of which are started solely in the interests of publicans.

DOWNING COLLEGE, CAMBRIDGE. — OPEN FOUNDATION SCHOLARSHIPS.—At the College examination in June, 1877, two Foundation Scholarships of the value of £80 per annum will be awarded for proficiency in law and natural science respectively. These scholarships will be open to all members of the university who are of not more than three terms' standing from matriculation; and the successful candidates must at once enter Downing College, if not already members of it. For the law scholarship the subjects will be: the Institutes of Gaius and Justinian, the English Law of Real and Personal Property, and English Constitutional History. For the natural science scholarship the subjects will be: Chemistry (theoretical and practical), Physiology, Comparative Anatomy, and Botany; but special proficiency in one subject will be considered of more importance than a moderate knowledge of all. Candidates who are not members of Downing College must send their names to the Master on or before the 29th of May, 1876, accompanied by certificates of moral character. For further information apply to John Perkins, Esq., or to the Rev. T. J. Lawrence, tutors of the College.

BEQUESTS, &c., TO MEDICAL CHARITIES. — The Dowager Countess of Beauchamp bequeathed £100 each to the Royal British Benevolent Society for Incurables, St. George's Hospital, the Hospital for Consumption, &c., at Brompton, and the Asylum for Idiots at Reigate. The Goldsmiths' Company have given £1000 to "The Queen's Fund," London Hospital.

Medical Appointments.

ANDERSON, A., M.B., C.M., has been appointed Junior House-Surgeon to the Huddersfield Infirmary, vice Wright, promoted.

ARCHER, S., M.R.C.S.E., has been appointed Resident Assistant Medical Officer at the Mill-road Workhouse, West Derby Union, vice Dunbar, appointed to the North Municipal District.

BRITTON, T., M.D., M.R.C.S.E., L.S.A.L., &c., has been reappointed Medical Officer of Health for the Barkisland, Brighouse, Elland, Hipperholme, Luddenden-Foot, Midgley, Northowram, Queensbury, Rastrick, Rishworth, Shelf, Southowram, Sowerby, Sowerby-bridge, Soyland, and Warley, Urban, and Halifax Rural, Sanitary Districts, for five years, at an increased salary of £700 per annum.

CAMERON, C. A., L.K.Q.C.P.I., F.R.C.S.I., Ph.D., has been appointed Public Analyst for the County of Down: £40 per annum, and 2s. 6d. to 10s. 6d. per analysis.

CAMPBELL, W. M., M.D., has been elected Surgeon to the Liverpool Northern Hospital, vice Graham, resigned.

CHANDÔR, H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Camberwell Workhouse Infirmary, vice Paterson, resigned.

DAVIES, R., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed permanently Medical Officer and Public Vaccinator for the Glyncorrwg District of the Neath Union.

DAVIES, H., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Llansamlet District of the Neath Union.

HIBBERD, H. J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for Nos. 5 and 8 Districts, and Medical Officer to the Workhouse, of the Woodbridge Union, Suffolk, vice Cross, resigned.

HORSFALL, J. S., L.K.Q.C.P.I., M.R.C.S.E., has been re-elected Medical Officer for the Sowerby District of the Halifax Union.

LONGBOTHAM, G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 2 District of the Middlesborough Union.

MCKENZIE, R. F., M.B., L.R.C.S.Ed., has been appointed Medical Officer for No. 1 District of the Middlesborough Union.

MASTERMAN, G. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for No. 1 District of the Thingoe Union, Suffolk, vice Taylor, resigned.

PEARSON, T. R., M.D., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for No. 3 District of the Middlesborough Union.

PEGGE, C., M.R.C.S.E. and L.M., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Britonferry District of the Neath Union, vice Griffiths, deceased.

SOMERVILLE, A., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Endon District of the Leek Union, Staffordshire, vice Wanklyn, deceased.

STERLING, R., L.R.C.P.Ed., L.R.C.S.I., L.M., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births, &c., for the Knocktopher Dispensary District of the Thomastown Union, co. Kilkenny, Sanitary Inspector for the Knocktopher Sub-district of the Thomastown Rural Sanitary District, and Medical Attendant to the Royal Irish Constabulary, vice Blunden, resigned.

WRIGHT, E. A., M.B., C.M., has been appointed House-Surgeon to the Huddersfield Infirmary, vice Irving, resigned.

YOUNG, C. G., M.B., C.M., has been appointed Medical Officer for the Eastern District of the Gower Union, vice Hurley, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BRIGHT.—On the 17th ult., at Cannes, the wife of G. C. Bright, M.D., of a daughter.

BROWNRIGG.—On the 24th ult., at Hill-view, Streatham-common, the wife of John Annesley Brownrigg, L.K.Q.C.P.I., of a daughter.

FLETCHER.—On the 13th ult., at Camden-road, the wife of John Corbet Fletcher, M.D., of a daughter.

GANGE.—On the 16th ult., at Faversham, the wife of Frederick A. Gange, M.D., of a son.

HILL.—On the 24th ult., at Bedford-terrace, Upper Holloway, the wife of James R. Hill, L.R.C.P.L., of a daughter.

RICKARD.—On the 11th Feb., at Palamcottah, the wife of F. M. Rickard, M.R.C.S.E., Surgeon Madras Army, of a son.

SANDILAND.—On the 23rd ult., at Southgate-road, N., the wife of A. H. Sandiland, M.R.C.S. and L.R.C.P.L., of a daughter.

THORNE.—On the 26th ult., at Inverness-terrace, Hyde-park, the wife of Richard Thorne Thorne, M.B., of a son.

MARRIAGES.

HARTRIDGE—MURRAY.—On the 21st ult., at Holy Trinity, Twickenham, Gustavus Hartridge, F.R.C.S.E., to Susan Catherine, daughter of the late Lieut.-Col. Murray.

MURRAY—MOLTENO.—On the 24th Feb., at St. Saviour's, Claremont, Cape of Good Hope, Charles Frederick Kennan Murray, M.D., to Caroline, daughter of the Hon. J. C. Molteno.

DEATHS.

CORNELIUS.—On the 20th Feb., at Compton-road, Islington, James Connor Cornelius, L.R.C.P.Ed., aged 69.

CULLEN.—On the 29th Feb., at Carlow, Paul John Cullen, L.A.H.D., aged 75.

FISHER.—On the 22nd ult., at Grosvenor-gate, Park-lane, Sir John William Fisher, F.R.C.S.E., aged 80.

GODDARD.—On the 26th ult., Samuel Goddard, M.R.C.S.E., of Bursiem, aged 73.

GRIFFITHS.—On the 24th Feb., at Neath, David Emmanuel Griffiths, L.R.C.P.Ed., aged 35.

HOLLAND.—On the 21st ult., at St. Chad's, Lichfield, Charles Holland, M.D., aged 74.

MASON.—On the 8th ult., at Wyburn Villas, Surbiton, Charles Ignatius Mason, L.R.C.P.L. and M.R.C.S.E., aged 47.

MURRAY.—On the 6th Feb., at Carnoustie, Forfarshire, David Murray, M.D., aged 84.

O'BRIEN.—On the 24th ult., at Maidstone, Walter Creagh O'Brien, L.R.C.P.Ed.

O'ROURKE.—On the 9th Feb., at Enniscorthy, Patrick O'Rourke, M.D., aged 80.

PICKERING.—On the 22nd ult., at the Orchards, Longparish, John Pickering, M.D., for nearly fifty years Resident Medical Officer at the Royal Military College, Sandhurst, aged 87.

RENNY.—On the 25th ult., at Exmouth, Charles Renny, C.B., F.R.C.S.E., late Surgeon-General Bengal Service, aged 84.

THOMPSON.—On the 20th ult., at Sheffield, Edward Thompson, M.R.C.S.E., aged 67.

TURNBULL.—On the 23rd ult., at Clevedon, Gavin Ainslie Turnbull, L.R.C.S.Ed., Surgeon-Major, Army, aged 48.

[N.B.—*A fee of 1s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

MR. CAMPBELL DE MORGAN, F.R.S.

A WELL-EXECUTED bust in marble of this gentleman has just been presented to the Middlesex Hospital by the artist, Mr. J. G. Lough, who gives it as a "token of affection and gratitude" to the subject of it. The bust has been placed in the museum attached to the hospital, where it occupies a prominent situation facing the entrance. Mr. Lough's generosity in presenting to the hospital this permanent memorial of one who has long been connected with the institution, has only been equalled by the skill and faithfulness with which he has rendered the work. The numerous pupils and friends of Mr. De Morgan will be pleased to learn that the bust is a success both as a work of art and as a striking portrait. There is, further, a certain appropriateness in the gift, as but a short time ago a movement, initiated by his old pupils, and most cordially supported by a large number of the profession, to present Mr. De Morgan with a testimonial portrait, fell through in consequence of his declining to sit for his portrait. The disappointment then felt by many will be somewhat allayed by the knowledge that the bust of him they desired to honour will henceforth adorn the walls of the hospital, so long the seat of his labours.

Dr. P.—Although the application of the cautery would not, under the circumstances, be so sure of success as when applied immediately, it would certainly be deserving of a trial. We should prefer the nitrate of silver.

Mr. Macleod.—Try Ford and Co., 52, Long-acre.

A CASE OF DIFFICULT PARTURITION.

To the Editor of THE LANCET.

SIR,—I was recently requested to attend, in conjunction with my friend and neighbour, Dr. Wright, of this lane, a case of protracted parturition under the following circumstances.

The patient, aged thirty-five, not a primipara, had been in labour some hours, and no satisfactory progress was made. On examination it was found that the liquor amnii had escaped, and that there was a presentation of the funis and head, the face lying much impacted on the pubis, and the vertex, in the contrary direction, resting on the brim; its further advance being arrested, notwithstanding strong expulsive pains, by an abnormal development of the promontory of the sacrum, giving to the finger the sensation of a sharp ridge or process, lessening to the best of my judgment, by its projection, the antero-posterior diameter of the pelvis to the extent of an inch or thereabouts, and occasioning thus both distortion and contraction of the cavity, otherwise of the usual size.

The obstetric history of the woman was this. She had had five previous confinements, all footling births. The first, I was reminded, had been so made from an ordinary head presentation by myself, having been called in some years since by her then medical attendant, who was the first to notice the pelvic deformity. At this period, and this only, a living fœtus was extracted, the remaining four being still-born, and in each instance, as reported, she was delivered with extreme difficulty, the children being all well formed and fully sized. She had been under the care of several practitioners. One of her accouchements occurred in Germany, of which country both she and her husband are natives, and all had the same disappointing result, except the first, as above mentioned.

As we found pulsation still existing in the cord, and that the patient's strength was good, we determined to attempt delivery with the long forceps; turning or effectually altering the position of the head being regarded by us as impracticable from the impaction that had taken place. Our utmost efforts continued for a considerable period. Failing to draw the head beyond the obstacle, or to make any change in its unfavourable position, the pulsation of the cord having ceased, there being considerable tumefaction of the scalp, and the patient manifesting both restlessness and exhaustion, recourse was had reluctantly to craniotomy; but even with this aid to delivery, owing to the full size of the chest and shoulders of the fœtus, it was quite an hour before extraction was accomplished.

Dr. Wright suggests the question, with respect to the interest of this or similar cases to the practical obstetrician, "How is it that the head always passed the contracted pelvis when the case was a footling or made such? Was it that the head was in a better position for extraction, and more force could be used, or has the deformity of the pelvis become worse since her last confinement?" On this latter point I can, of course, give no actual or precise information; but assuming, as is most probable, the pelvis to have remained *in statu quo*, I should give it as my decided opinion that the obstetrician is placed under much more favourable circumstances when in parallel cases the feet present, from the advantages he possesses both in adjusting position and using safely increased force while accomplishing delivery; and this conclusion is, I believe, generally admitted. Both Dr. Wright and myself have strongly urged our patient in any future pregnancy to submit to the induction of premature labour after or on completion of the seventh month. It only remains to add that she is, on his authority, perfectly recovered, and without the slightest personal damage.

I remain, Sir, yours &c.,

Upper Kennington-lane, March, 1876. H. ST. J. BULLEN.

P.S.—Dr. Wright further adds: "From what I can hear, the size of the children was always about the same."

Mr. Edwin Tipple.—The behaviour was irregular, not to say discourteous. The lady might very naturally feel concerned at having a casual caller on one of her servants detained for a week or more in her house, and was at perfect liberty to ask for his removal; but she might have done this through our correspondent in attendance. Mr. Huddart ought to have declined to see the patient while another medical man was attending, unless in consultation.

Observer's letter is a little too long and discursive for insertion.

THE LATE CAPTAIN BUTLER AND DR. ELLIOTT.

THE Indian Government has recognised the services of Dr. John Robert Elliott, who was summoned to the assistance of the late Captain Butler, Political Agent, and head of the Naga Hills surveying expedition, in a very gratifying manner. Dr. Elliott, who is in medical charge of the Numaligbur Factory of the Jorehaut Tea Company, Upper Assam, after the briefest possible preparation, made a march of nearly one hundred miles with an escort of native infantry in three days to Pangti, the village where the wounded officer lay. The party reached their destination in safety, though not without having encountered resistance on their way from the native tribes. Unfortunately Captain Butler's wounds were of so serious a nature that little could be done beyond the alleviation of the patient's suffering, and he succumbed three days after Dr. Elliott's arrival. The Chief Commissioner of Assam has recently, through his Secretary, addressed to Dr. Elliott a letter, expressing his high appreciation of that gentleman's promptness, ability, and kindness, and requesting his acceptance of a cheque for 500 rupees.

Mr. Wm. Thomson.—Thanks. We will refer to the numbers mentioned.

A QUESTION OF GOOD FEELING.

To the Editor of THE LANCET.

SIR,—Kindly give your valuable opinion upon the following. For more than twenty-five years our senior partner has held the workhouse and district No. 6 of this union, and twelve months ago, to oblige the guardians, accepted No. 5 district, which Mr. Steer, of this town, refused to take, although it adjoined his parishes, whilst I have held No. 7 district for the last seven or eight years. A third partner having joined our firm, we desire to free the senior of parish work, and thereupon the senior calls upon the clerk to the guardians and explains our wishes. The clerk says: "By writing the Local Government Board he believes the workhouse and Nos. 5 and 6 can be transferred to myself, whilst No. 7 can go to the junior partner." Thus, on January 5th we resign our appointments, I applying for workhouse and Nos. 5 and 6, *to which I have been deputy for last ten years*, and the junior partner applied for No. 7. On the board-day (Jan. 7th) the clerk gives no intimation to the guardians of the advice he gave the senior partner, and it is decided to advertise *the workhouse and Nos. 5 and 6 districts* ONLY. On Jan. 14th I find Mr. Steer, who is a Poor-law medical officer, together with his party, had made a most determined canvass of the guardians, including several of my patients, to be appointed to the workhouse only. As I had not made my canvass, I was now compelled to write a few lines to each, but finding I was too late in the field, my senior partner called upon Mr. Steer and explained his object in resigning, the advice given by the clerk, and that now he intended to withdraw his resignation, and hoped Mr. Steer would withdraw his application. Mr. Steer refusing to do this, I retired from the contest, whilst my partner withdrew his resignation—which the Board would not accept,—and applied to be appointed to the workhouse and districts 5 and 6, as before.

On March 3rd Mr. Steer was appointed to the workhouse, my senior partner to the 5 and 6 districts, and No. 7 district was given to our junior partner. I only add that our firm could not accept these appointments without the workhouse.

Has Mr. Steer acted with professional etiquette in this matter?

Upon your answer depends whether we do or do not retain our hospital appointments, and of which hospital Mr. Steer is a medical officer.

I am, Sir, yours obediently,

Saffron Walden, March 28th, 1876. EDWARD HARLEY.

*** It would be wrong in us to conclude—as, indeed, we feel it impossible to believe—that Mr. Steer, when he canvassed for the appointments resigned by Messrs. Welch, Harley, and Field, and accepted the appointments at the hands of the guardians, fully realised the fact that the firm only resigned on the understanding that the guardians and the Local Government Board would agree to a rearrangement of the work and to reappoint the junior members of the firm to the workhouse and the 5, 6, and 7 districts. The clerk to the guardians led Mr. Welch to resign, on the understanding that the appointments could be easily transferred. It is not for us to comment on the conduct of the clerk to the guardians. But surely a brother medical man will not, after a full explanation, be a party to a procedure like this, or to retaining an appointment never really relinquished by a firm which have the very strongest claims to it.—ED. L.

CHARITY VOTING REFORM.

THE useful Association that is devoting its energies to the reform of the method in which those in need of relief or help of various kinds are brought into relation with institutions that supply such aid, has issued a circular to each of the 13,000 subscribers to the Earlswood Asylum for Idiots. This document, after pointing out the general objections to the usual voting and canvassing system, urges that the system is specially injurious in the case of the Earlswood Asylum, inasmuch as it interferes with the admission of idiots at the early age at which their education should commence.

Mr. A. W. Dowding.—The last edition of Druitt's Vade-Mecum; Quain and Wilson's works.

L.R.C.S.I.—It is quite conceivable that they may at times act injuriously.

ICTERUS COINCIDENT WITH RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Can any of your readers kindly inform me if they have met with cases of icterus coincident with articular rheumatism? I have met with two cases, and it would be interesting to find out if any pathological connexion exists between the two diseases. Uric acid and lactic acid have each in its turn been supposed to be the morbid material in the blood in rheumatism. It is at least probable, therefore, that the biliary acids might play an equally important part. I may mention that in my cases the rheumatism was of a subacute form.

Yours truly,

Tongue House, March 23rd, 1876. J. A. AUSTIN, M.B.

A SANITARY PLEA FOR BROKEN WINDOWS.

THE owner of a licensed lodging-house in Liverpool was recently summoned at the Borough Police Court for allowing the house to be in such a dilapidated condition as to constitute a nuisance, which rendered it unfit for habitation. In two of the back rooms the window-sashes were described as defective; in fact, they did not contain one whole pane of glass, and yet the two rooms contained five beds. On behalf of the Town Council, as the borough sanitary authority, it was asked that the premises, which were licensed for thirty-one lodgers, should be closed until properly repaired. To such a course the defendant demurred, and pleaded that the house was in proper condition, inside and out, except the windows. In defence of the glassless windows, he quoted from the speech of a Lord Mayor of Dublin, who had claimed that he ruled the healthiest town or city in the United Kingdom, and explained the fact by stating that Dublin contained the largest proportion of houses without doors or windows. In order that his lodging-house might vie with the healthiness of Dublin, the defendant begged that he might not be compelled to put glass in the windows. The magistrate was not, however, convinced of the advantage to health to be derived from sleeping in rooms ventilated in this manner, and adjourned the case for a week to allow the defendant time to complete the necessary repairs. The defendant in this case was probably unaware that the health of Dublin has recently been in an unsatisfactory condition, or he would probably have attributed it to the reduction in the number of the windowless and doorless houses, the sanitary value of which was so highly esteemed by a former Mayor.

A Subscriber.—1. Dr. Eustace Smith's book.—2. Dr. Roberts's work.—3. The *brochures* by Dr. Liveing or Dr. Latham of Cambridge.

Mr. E. Herring.—There is no such instrument.

THE DISCUSSION ON SYPHILIS.

To the Editor of THE LANCET.

SIR,—Will you allow me to supplement my remarks at the Pathological Society by the brief narration of the following case, which seems to have an important bearing on some of the points raised for discussion by Mr. Hutchinson's able paper.

Sergeant D——, of the Rifle Brigade, aged thirty-five, came under my care at the Coldstream Guards Hospital towards the end of December, 1866, with right hemiplegia of three days' standing, associated with great pain and tenderness about the junction of the left parietal with the frontal bone, and so closely following a previous development of nodes on the forehead as to leave little doubt regarding the syphilitic nature of the attack. On further examination, the indurated cicatrix of a venereal sore was found on the penis and a copper-coloured scaly eruption on the skin, and at first sight this connexion might have seemed conclusive proof of that irregular coexistence of secondary and tertiary disease referred to by several speakers. On receiving, however, notes of the earlier history of this patient from Dr. Patterson, of the depôt battalion at Winchester, it came out that in 1863 he had suffered from an infecting chancre, followed by secondary symptoms, and from this we must undoubtedly trace the tertiary lesions observed at the time of admission, whilst the existing primary and secondary manifestations belonged to an infection three years later in date. If we believe the hemiplegia to be syphilitic, which there seems no reason to doubt, we have here distinct evidence of the occurrence of an old tertiary affection during a second attack of syphilis, proving that the first was worn out, on the well-known principle of the poison of syphilis, while it lasts, protecting the system from the infection of another true venereal sore. Not only also does this case form an addition to Mr. Gascoyen's well-known series of cases of cured syphilis, but it gives support to Mr. Hutchinson's views concerning the local nature of tertiary affections, as it is evident that the poison of the first infection must have been eliminated from the system before the second could exercise its independent effects. Perhaps some similar source of fallacy might have been traced in the interesting case mentioned by Dr. Drysdale; but, after all, I should not feel disposed to consider the old-established relation between the secondary and tertiary stages as organically disturbed by an occasional irregularity of development. We must remember that we have here no accurately calculated date of evolution as in the eruption of fevers; that we talk of the tertiary period rather from its local manifestations than from the exact time of its appearance, and that we gauge the quality of the respective pathological products from the therapeutic relation they bear to mercury and iodine rather than from their structural peculiarities. Constitutional variation, the results of treatment, and many other causes may combine to affect that regular development of the sequelæ of syphilis which I believe to be of so much importance clinically, and to hurry on the destructive effects of the more profound or visceral lesions. For prognostic purposes I have great faith in regularity of the early secondary symptoms, and should always look upon a case with confidence which begins with roseola, and runs its course through several of the milder constitutional affections. On the other hand, when a papular eruption directly follows the primary sore, iritis is a very frequent combination, and the early appearance of pustules or tubercles I should always look upon as of ill omen.

I am, Sir, your obedient servant,
R. FARQUHARSON, M.D.,
Late Assistant-Surgeon, Coldstream Guards, &c.

Brook-street, March, 1876.

To the Editor of THE LANCET.

SIR,—Permit me to correct a misapprehension that may possibly arise from your report of my observations at the Pathological Society on Tuesday last.

I desired to convey the results of observations founded mainly on service in the Guards, together with an impression that Mr. Hutchinson's views as to the unity of syphilis were held by the majority of army medical officers. If it were inferred that I spoke in any degree as a representative mouth-piece of army surgeons generally, I must disclaim the assumption. I regretted much the absence of older and more experienced officers, who would be pre-eminently fitted to speak on points of this nature.

I inadvertently passed over a memorandum which I had made relative to Dr. Wilks and Mr. Hill's remarks on internal gummata. As their views have neither been endorsed nor opposed by other speakers, I beg leave to correct now my omission, and to say a few words on the subject. These gentlemen advanced a theory—if I am not in error, Dr. Wilks rested his opinion on but one, or at the most two cases—that when secondary symptoms are either slightly developed or absent, internal gummata are present in the viscera to a proportionately large extent. While admiring the originality and ingenuity of this hypothesis, I venture to ask, with all deference to so high an authority as that of Dr. Wilks, whether actual experience affords any adequate grounds for, or support of, this rather startling proposition.

Rapid and extensive deposits of the kind in organs so important as the lungs and liver we might well expect to be ushered in by grave constitutional disturbance. Is this the case? Occasionally, indeed, we meet with pyrexia and indications that point rather to some chest affection, such as incipient pleurisy, but all disappear when an eruption relieves the system; and, for my own part, I have not witnessed a case where febrile symptoms were not speedily followed by skin or other secondary affection.

If syphilis is to be regarded as a fever of the exanthematous class, we might reasonably look for some analogy to the latter when examples of suppressed eruption arise. Is any to be found? I believe not. In a case of measles or scarlatina we know how serious and apparent are the symptoms of internal visceral lesion when the skin does not speedily throw off the poison. Can we observe anything of the kind when secondary symptoms are imperfectly manifested? Rather I have attributed in my own experience the absence, or slight extent, of secondary disease to the circumstance of a patient having been brought at an early period efficiently under the influence of mercury by means of that best and surest medium of exhibition—inunction. Moreover, in fevers, particularly of the typhoid class, we know how materially both the skin affection and sequelæ vary in extent, and in some instances are wholly absent.

It has not been my good fortune to meet with gummata of the lungs in the post-mortem room of the regiment. Affection of the testis is the form usually witnessed. I apprehend that any diagnosis of such deposits in the lungs, and particularly if the antecedents of the patient are unknown, must be, to say the least, extremely difficult. Chronic pneumonia affecting the whole lung I have, though very rarely, met with as a sequence of syphilis.

Your obedient servant,
FREDK. ROBINSON, M.D.,
Scots Fusilier Guards.

Claverton-terrace, St. George's-road, March 27th, 1876.

To the Editor of THE LANCET.

SIR,—In the interesting discussion which has been elicited by Mr. Jonathan Hutchinson's paper on "Syphilis," it is stated by Dr. Gibbon that the Hebrew race enjoy a singular immunity from this disease and scrofula. There is reason to believe that the cause of this immunity is not far to seek. The Jews, as a caste, are much more moral and religious than Christians. They carry their religion more into the details of their daily life, and it is associated with a carefulness and discreetness which are said to be characteristic of the race. It is not often that one meets with a drunken Jew. Now, I suppose that it is not too much to affirm that half the cases of syphilis originate from sexual intercourse when one or both members of the congress are under the influence of alcohol. At such times the precautions of cleanliness are not subsequently observed. The odds are thus greatly against the Christian copulator as compared with one of the older dispensation. The same cause which preserves the Hebrew from the immorality of excessive indulgence in alcohol preserves him also from fornication. Here again he is upon vantage ground, and either his creed or his caution protects him from the destructive agency of syphilis and scrofula.

But, on the other hand, what I am chiefly concerned to note is that insanity when it possesses the Jew is more frequently of an unpromising type than in the members of any other religious caste. There is a passivity about both the melancholic and maniacal forms of madness which assimilates to imbecility, and gives an unfavourable prognosis. I have noted this over and over again.

These circumstances are a paradox, and invite the investigation of scientific men.

Faithfully yours,
Colney Hatch, March 27th, 1876. EDGAR SHEPPARD, M.D.

AN AMATEUR MADMAN.

IT is stated that a volume entitled "A Mad World: being two weeks' experience in an American Private Lunatic Asylum," is about to be issued by a well-known publishing firm. The author, who describes himself as an "Amateur Maniac," feigned madness, and was accordingly conveyed to one of those establishments, the secrets of which he professes to reveal. Though the book may possibly prove attractive by reason of its sensational character, we should be disposed to counsel the use of some discrimination in the acceptance of statements of facts gleaned in any such amateur fashion.

Cardiff.—We must decline noticing such rubbish as that contained in the newspaper enclosed.

M.R.C.S., (Ford.)—Applications must be made to the Home Secretary.

FOOTBALL.

To the Editor of THE LANCET.

SIR,—As an ardent admirer of the much abused Rugby union game, may I be permitted to add a few words in its defence to those of a "Head Master."

The scrimmages, which are looked on with such horror by outsiders, are, I believe, the safest part of the game, it being almost impossible to receive more severe injuries in them than perhaps a broken shin. It is when two players charge and kick at the ball at the same time that serious accidents happen, and this seldom occurs in the Rugby union game; whilst it is, or should be, if the players show a proper amount of English pluck—a constant occurrence with the Association rules. When I remind the "Head Master" that without picking up the ball, drop-kicking, which he so much admires, would be impossible, I feel sure he will reconsider the opinion he expresses in his postscript.

In conclusion, may I state that, although I played football regularly at school, also for three and a half seasons in London with my hospital team, and since then with a country club, I have only seen one accident in any of the games I have played severe enough to necessitate a player leaving the ground.

Your obedient servant,
March, 1876. M.R.C.S. ENG., L.R.C.P. LOND.

THE HARVEY MEMORIAL.

IT is proposed that the statue of Harvey to be erected at Folkestone shall be completed in two years from this time. Already the subscriptions promised and received amount to £800—a fair proportion of the sum (£3000) which will be required for a really first-rate monument worthy of the nation and of the man whose brilliant services to mankind it is proposed thus to recognise. The Honorary Secretaries make a wide appeal to the public and the profession for funds for this purpose. Lord Derby is the Chairman of the London Committee, and Sir George Burrows and Sir James Paget, the Treasurers. Mr. George Eastes, M.B., 5, Albion-place, Hyde-park-square, W., and Mr. W. G. S. Harrison, B.A., Town Clerk, Folkestone, are the Honorary Secretaries to the Fund. Either of the Honorary Treasurers or Secretaries will be happy to receive subscriptions; or they may be paid in to the account of the Harvey Tercentenary Memorial Fund at the Western Branch of the Bank of England, Burlington-gardens, London, W.

Mr. Handsley.—We cannot recommend a particular person. Why not apply to the teacher of the subject at our correspondent's hospital?

Dr. Urban Pritchard.—Next week.

IDIOPATHIC CEREBRAL IRRITATION.

To the Editor of THE LANCET.

SIR,—The particulars of the following case appear to me to be sufficiently interesting to warrant my offering them for publication.

On the evening of March 13th, I was called to see the patient, a woman, aged seventy-three. She had been healthy during the last two or three years, during which time she has suffered from nervousness and hysteria. It appears she opened the door of her sitting-room, and screamed. An occupant of the house came to her assistance, when she said, "I am glad you are come"; then sank on a chair, vomited, and apparently fainted. I found her being supported on the chair; pulse scarcely perceptible; skin moist and pale; breathing very slow and quiet; pupils closely contracted; sphincters relaxed; and every joint, even the fingers, flexed. I gave her about a teaspoonful of brandy-and-water with difficulty, owing to her teeth being firmly clenched. After a few minutes she was a little revived, and I placed her on the sofa upon her back. She immediately drew up her legs, and bent forward her back. The patient could be slightly roused by speaking loudly to her. When I left she was lying curled up in bed. I ordered bromide of ammonium, fifteen grains; compound tincture of valerian, half a drachm; spirit of chloroform, ten minims, to half an ounce of water; every four hours.

Mr. Body, of this town, saw her the following day (March 14th). Temperature 99·2°; pulse 72, small and feeble; respiration 19; restless and muttering through the night. Nutrient enemata ordered. She continued in much the same condition until the morning of the 15th, when the left pupil was slightly, though markedly, more dilated. The same evening both were equally dilated, and acted sluggishly. Early the following morning (the 16th) she asked for a cup of tea; was very exhausted. To-day she lies on her back. From this time to the 19th, when she died, she gradually became weaker, though the brain symptoms had almost entirely left her.

I can find no description of a similar case in the authorities to which I have referred. The symptoms approach most nearly to those described by Erichsen (vol. i., p. 410), under the head of "Cerebral Irritation" following an injury, the flexion of every joint being a prominent feature. On careful inquiry and examination of the head I could detect no evidence of injury.

Unfortunately I was unable to procure a post-mortem examination, but should be glad to hear the particulars of similar cases in which a post-mortem has been made, or, if unique, the probable lesion.

Your obedient servant,

Crediton, March 22nd, 1876. W. PHELPS, M.R.C.S., &c.

M.R.C.S.E.—The sensation is not uncommon, often depending on flatus, or having its seat in some other discomfort or distension of the bowel. Care should be taken to have the bowels free from accumulation. We take it for granted that there is no malformation or misplacement of the uterus.

J. H. H.—Consult a surgeon.

THE HUNTINGDON COUNTY HOSPITAL.

To the Editor of THE LANCET.

SIR,—Your remarks on the recent election of an additional honorary medical officer to the Huntingdon County Hospital are evidently founded on *ex-parte* information, and, I fear, are calculated to wound the reputation and feelings of an honourable member of our profession.

Permit me to give you the bald facts of the case. All the medical men in Huntingdon, save one, were, and are, honorary medical officers to the hospital. The youngest of these honorary officers was elected about a year ago, and, so to speak, within a few days of his arrival in the town, and on becoming junior partner in an old firm of surgeons here. Apparently to make room for him, the senior partner resigned his honorary office at the hospital, and was made a consulting officer. At the election to the vacancy thus formed the stranger was elected, and the gentleman whose non-election you deprecate, although an inhabitant of some standing, and a practitioner in favour and repute, was passed over. This treatment was felt very much by the whole town and neighbourhood to have been due to influence strongly and wrongly exercised, and this feeling found vent in the only way possible and practicable—viz., in the election the other day.

Huntingdon is only a small place, and in small places professional feelings and jealousies are too frequently too highly strung.

Your remarks, as they appear reproduced in a local paper, appear to imply that the medical men in office are professionally superior to the medical man out of office. I do not believe you intended this construction to follow, and can assure you that Huntingdon esteems all her medical men, and that the professional race run is honourably close.

In conclusion, will you allow me to urge you to use your influence towards abolishing honorary offices altogether. The whole system is a great sham. Is it not a fact beyond dispute or controversy that every honorary office in the kingdom is looked upon as an aid to private practice—in short, as an advertisement?

Yours respectfully,

March, 1876. PAX.

COCA-LEAF ON THE BRAIN.

ONE of our contemporaries has got coca-leaf on the brain, and really seems to be in a very bad way. The marvellous plant has obliterated that ordinary politeness which gives a person credit for speaking the truth. And it has dulled the sense of proportion; so much so that the feat of walking 450 miles in six days, with a bad cold and a swollen knee-joint, seems to be lost sight of in the light of this great question of whether Mr. Weston, in spite of his assertion to the contrary, did not take coca-leaf. We must leave Mr. Weston to take his own course as to the persistent implication that he is saying what is not true. But in the name of common sense, to say nothing of common manners, it is but just to say that it is simply absurd to distract attention from the pedestrian feat which has astonished the country to a little detail of this kind. There is nothing in Sir Robert Christison's experiences of coca-leaf, or in that of anybody else, to explain either Mr. Weston's walk or the weekly essays on the subject which appear in our contemporary in place of actual information. The explanation of the essays is simple—coca-leaf on the brain.

Mr. S. M. Bradley.—It shall appear.

DROPSIES.

To the Editor of THE LANCET.

SIR,—As the subject of tapping in ovarian dropsy and ascites is being ventilated in your columns at the present time, I think that a short account of a case which came under my notice a few years ago may prove of interest.

Louisa R——, aged twenty-seven, unmarried, but who had been the mother of one child, first consulted me in the autumn of 1868. The illness commenced with an attack of jaundice, upon which ascites supervened, for the temporary alleviation of which I tapped her for the first time on March 6th, 1869, removing rather over two and half gallons of serum. She bore the operation well; but in less than a month—viz., on April 3rd—paracentesis had again to be resorted to, and on this occasion three gallons more were evacuated. This continued at intervals for exactly a twelvemonth, the patient being tapped twenty-one times, a hogshead and a half of fluid being removed. The patient subsequently regained perfect health, and is well and strong at the present time. I subjoin the dates of the various tappings, and the amount drawn off upon each occasion.

1869.	Galls.	Qts.	1869.	Galls.	Qts.
March 6th	2	2½	September 25th	3	3½
April 3rd	3	0	October 9th	3	3
May 4th	3	2	October 23rd	3	3
June 5th	3	3	November 6th	3	2½
June 25th	4	0	November 19th	4	0
July 14th	4	0	December 10th	4	0
July 30th	4	0	December 24th	4	0
August 13th	3	3	1870.		
August 21st	4	0	January 17th	4	1
September 1st	4	0	February 4th	4	0
September 13th	3	3	March 4th	3	3

I do not see why a permanent tap, as suggested by Mr. Watt, should not be tried in such cases, provided there is nothing special in the constitution or diathesis of the patient to contra-indicate it, and also provided that the patient be kept under strict medical espionage during the first week or two of the experiment. He certainly should not be permitted to act so foolhardily as Mr. Ellis's patient did.

I will not ask to occupy more of your valuable space, but should be glad to see this interesting question further treated by others.

Yours truly,

Glastonbury, March 21st, 1876. J. A. BRIGHT, M.R.C.S.E., &c.

Mr. E. S. Pearse.—1. Occasionally guardians appoint a gentleman with only one qualification; but it is not strictly regular to do so. — 2. A gentleman holding only the M.R.C.S. cannot recover for medical attendance. 3. The M.R.C.S., though involving an examination in Medicine, is not a double qualification.

W. J. C.—One of the ordinary text-books, to be obtained of a medical publisher, will probably suit our correspondent.

DISEASE OR MALINGERING?

To the Editor of THE LANCET.

SIR,—Can any of your readers diagnose the disease and probable lesion in the following case, or say that it is an undoubted case of malingering?

J. C——, aged twenty years, with two and a half years' service as a soldier, and having every other symptom of perfect health, is in the habit of falling down in the following kind of fit:—On being called upon for any sudden exertion, or on going through the motions of "*closing to the right*" or "*left*" after standing for about ten minutes, the lower limbs tremble, the head is turned to the left, the mouth opens, and the tongue is protruded and drawn to the right; the face becomes congested, and unless there is some object which he can grasp, he falls generally to the right. The fit lasts about twenty seconds, when he rises and reports himself as "all right" again; the only symptom remaining being a little congestion of the conjunctivæ, with slight dilatation of the pupils. He states that he never loses consciousness.

Yours truly,

March 22nd, 1876. ENQUIRER.

SUGGESTIONS OFFERED.

To the Editor of THE LANCET.

SIR,—In reply to "Subscriber's" letter, in your issue of March 18th, I beg to suggest his trying a continued course of pitch with iodide of potassium and arsenic. The liq. picis to be applied every night and morning to the spots, and a pitch pill of five grains thrice a day, with a mixture of the iodide and arsenic thrice a day. I shall be glad to hear the result through the medium of your valuable journal.

Yours truly,

Shepton Mallet, March, 1876. R. W. HYATT.

To the Editor of THE LANCET.

SIR,—In answer to "A Subscriber," I would venture to suggest that he describes about as clear a case of malingering as ever fell within the practice of,

AN OLD SOLDIER.

March 19th, 1876.

FEMALE MEDICAL STUDENTS.

ONE of the weekly journals of St. Petersburg gives the following statistical particulars touching the number of women studying or practising medicine in Russia. During the year 1875 the number of female medical students amounted to 171, of whom 102 belonged to the nobility, 17 to high trades, 14 to small trades, 12 to the clergy, and 24 to the different classes of the gentry. Amongst the number, 23 were Jews, 12 Armenians, and 3 Lutherans; the remainder were of the orthodox persuasion. 29 were married, and 53 had already received their diploma. Another Continental journal also gives some details of the number of female students in the University of Berlin. Their number is 30, of whom 2 are studying Law; 25, Medicine; and 3, Philosophy.

Assistant.—We regret that our correspondent's letter was mislaid. His question is a legal one; but in point of equity he is certainly entitled to compensation.

THE COCA-LEAF.

To the Editor of THE LANCET.

SIR,—The following fact in connexion with "coca" may be of interest at the present moment.

The leaves of this plant, either smoked in a pipe or used as an inhalation, have a decided effect on bronchial spasm. I have recently employed it in this way with marked benefit in cases of idiopathic asthma, the dyspnœa and distress being much relieved, and more especially in chronic irritating cough. One gentleman, who could not sleep through paroxysms of coughing, now enjoys a full night's rest after smoking a pipe of coca mixed with a small quantity of tobacco. Moreover, it leaves no headache nor unpleasant after-effects. In addition, it will be found very aromatic and pleasant, and "smokes" as freely as tobacco. It dilates the pupil slightly.—Yours &c.,

March, 1876. LOUIS LEWIS, M.R.C.S.

To the Editor of THE LANCET.

SIR,—In connexion with the reported failure of the coca-leaf when tried by Weston to increase his powers of muscular endurance, I extract from a recent French traveller's narrative what is probably the true explanation. The traveller in question is M. A. Bresson, and he says:—"Elle [la feuille] ne peut être mâchée sans conséquences fâcheuses par l'Européen qui n'a pas cette habitude dès l'enfance."—(*Vide* "Le Tour du Monde" for 1875, vol. i., p. 327.) I am, &c.,

Edinburgh, 25th March, 1876. C.

ERRATUM.—By a clerical (not a printer's) error, the word "not" was left out in the ninth line in the letter of "H. H." on Typhoid and Distemper, published in THE LANCET of last week. It should have been "when *not* charged with the specific poison, could not alone produce typhoid."

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Latham, Cambridge; Dr. Wiltshire, London; Mr. Webb, Glasgow; Mr. Wood, Leamington; Dr. Merton, Glasgow; Mr. Brinckman, London; Mr. Grigg, London; Dr. Thomson, Wrenbury; Dr. Sheppard, Colney Hatch; Mr. Mormont, London; Mr. Macnamara, London; Mr. Le Duke, London; Mr. Watkins, Iowa, U.S.A.; Mr. Westerton, London; Mr. Storr, London; Mr. Harrison, Liverpool; Mr. Lue, Paris; Mr. Paterson, Scunthorpe; Mr. Toller, Gloucester; Dr. Tibbits, London; Dr. Keith, Edinburgh; Mr. Lewis, London; Mr. Mason, Pontypool; Dr. Campbell, Liverpool; Dr. Farquharson, London; Dr. Tipple, Greenhithe; Mr. Eales, Birmingham; Mr. Nayler, Richmond; Mr. Beck, Guilsfield; Mr. Hughes, London; Mr. Wigleworth, Birmingham; Messrs. Smith and Sons, London; Mr. Atkinson, Brixton; Dr. Lammiman, Tunbridge Wells; Mr. Pritchard, London; Mr. Rogers, London; Dr. Walker, Peterborough; Dr. Ritchie, Otley; Mr. L. Jones, London; Dr. Pritchard, Teynham; Mr. Dewar, Glasgow; Dr. Griffith, London; Mr. Arden, Bhundara, India; Rev. W. M. Farley, Cretingham; Dr. Dickinson, London; Dr. Austin, Lairg; Mr. Weston; Mr. W. W. Reeves; Dr. Roe, Ellesmere; Mrs. Robinson, London; Mr. Bradley, Manchester; Mr. Hall, Worcester; Mr. Handsley, Alford; Dr. Savage, Birmingham; Mr. Waterhouse, Bowden; Mr. Evers, Chesterfield; Mr. Garbutt, Dunston; Mr. Macleod, Paisley; Rev. R. Tabraham, Oakham; Mr. Morton, London; Mr. Langley, Clapham; Mr. Andrew, Birmingham; Mr. Mooney, Dublin; Mr. Deane, London; Dr. Sandwith, Wimbledon; Dr. Dickson, Bedford; Mr. Clark, Glasgow; Mr. Borchut, Netley; Mr. Walter, Bedford; Mr. Coulthard, Exeter; Mr. Edmonds, Dorchester; Mr. Owen, Enfield; Justitia; A Subscriber; Nobody; H. H.; PAX; F.R.C.S.; Plymouth; G. W.; L.R.C.S.I.; T.; A Surgeon-Major; Registrar-General of Edinburgh; Grimsby; M.D. L.; E. B. R.; J. H. H. H.; Obstetricus; W. J. C.; The Secretary, Society of Arts; M.R.C.S., Devonport; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Whidborne, Topsham; Messrs. Maclachlan and Co., Edinburgh; Dr. Monckton, Rugeley; Mr. Edmunds, Hackney; Miss Strong, Dawlish; Mr. Whalley, Bradford; Messrs. Bunsitall and Co., Kamptee; Mr. Kendall, Coniston; Mr. Monckton, Hurstpierpoint; Dr. Wades, Shanghai; Dr. Williamson, Ventnor; Mr. James, Carnarvon; Dr. Sandiland, London; Mr. Mason; Mr. Weekes, Chatham; Dr. Clouston, Hay; Mr. Cresswell, London; Dr. Tibbits; Mr. Bamforth, St. Albans; C.; Medicus, Cannon-street; A. A. S.; Nemo; J. D.; L. S., Liverpool; M. B., Deal; A. B., Glasgow; Medicus, Slough; Beta, Liverpool; Y. W. B.; A. B.; Q. Z.; L. S. D.; J. B.; Medical; J. C.; H. S.; M.R.C.S., Fowey; R. F., Camberwell; Studens, Liverpool; N. H.; Gamma, Barton-on-Trent; M.R.C.S., Bootle; W. X. Y., Padiham.

Newcastle Chronicle, East London Observer, Birmingham Morning News, Sussex Daily News, Holloway Press, Manchester Guardian, Surrey Advertiser, Western Morning News, Cork Constitution, Weston-super-Mare Gazette, Brighton Herald, Retford News, Hampshire Telegraph, Western Daily Mail, and *South Wales Daily News* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, MARCH 30TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Mar. 24	29·71	W.	36	38	...	52	32	...	Overcast
„ 25	29·71	S.E.	40	43	...	32	36	...	Overcast
„ 26	29·63	E.	35	39	...	49	33	...	Overcast
„ 27	29·47	E.	37	38	...	49	35	...	Overcast
„ 28	29·23	S.W.	49	49	...	55	38	0·41	Cloudy
„ 29	29·35	S.W.	46	48	...	56	45	...	Overcast
„ 30	29·55	S.W.	44	47	...	...	42	...	Fine

Medical Diary for the ensuing Week.

Monday, April 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Adjourned Discussion on Mr. Henry Smith's paper "On some Manifestations of Syphilis and their Treatment."—Mr. J. Knowsley Thornton, "On the Surgical Aspects of Pelvic Hæmatocele."

Tuesday, April 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Injury to Head, with Chronic Hydrocephalus; Contents of Dermoid Ovarian Cyst; Disease of Larynx, with Pressure on Right Inferior Laryngeal Nerve; Fracture of Cervical Vertebræ, with Injury of Cord; Occlusion of Superior Vena Cava; Congenital Absence of Superior Vena Cava; Lardaceous Liver and Spleen; Thrombosis of Mesenteric Vein; &c. &c.—9½ P.M. Conclusion of adjourned Discussion on Syphilis.

Wednesday, April 5.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Habershon, "On the Pathology of the Pneumogastric Nerve."

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Mr. Edwin Child: "Notes and Specimen of a Case of Extra-uterine Fœtation." — Dr. John Williams, "On the Mechanical Action of Pessaries."—Dr. Cooper Rose: "A Contribution to the Statistics of Midwifery in General Practice."—Dr. Gervis, "On a Case of Puerperal Septicæmia."—And other communications.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. M. Rénard, "On some Results from a Microscopical Study of the Plutonic and Stratified Rocks of Belgium."—Dr. J. J. Woodward: "Note on the Markings of Navicula Rhomboides."

Thursday, April 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HARVEIAN SOCIETY.—8 P.M. Mr. Crippe Lawrence, "On the Etiology and Treatment of Scrofulous Ophthalmia."

Friday, April 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Habershon, "On the Pathology of the Pneumogastric Nerve."

Saturday, April 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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